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Honey Is All Right Just As It Is

By George W. Bohne, County Agent

DID it ever occur to you that honey of fifty different colors and one hundred different flavors was a wise provision of nature, calculated to suit all tastes? Variety is indeed the spice of our menus, and one famous chef bragged because he could prepare eggs in one thousand different ways.

Mr. Walter M. Hull wrote very well when he answered his question as to "what ails honey." He says: "But, sugar is a standard product." Well, is it?

The large consumption of sugar is accounted for in the many ways in which it appears before the public. Candy accounts for the per capita consumption of nearly fourteen pounds per annum, and candy itself is of many shapes, colors and flavors, each variety having its own quota of ardent admirers. Preserves and cakes add to the number, and when we include soft drinks and ice cream, and puddings and desserts—then indeed do we begin to realize why sugar enjoys such great popularity.

The standardization of honey is indeed a bugbear to the beekeeping world. But why undertake that impossible task? I think it was Mr. Muth who said at the Southern Beekeepers' Conference that a friend of his came into his warehouse and was presented with several samples of what was considered the "best honey in the shop." After critically tasting the offerings, he failed to show the expected enthusiasm, but asked, "Have you no buckwheat honey?"

People learn to eat and enjoy that which is produced in their locality. Every honey has its local market, and honey of particular merit might find a wider range of appreciation, so why condemn honey from whole sections of these United States just because it is different from that which you produce. Climatic influence induces dietary preference in

Well, well—guess Walter Hull started something, last month, with "What Ails Honey?" George Bohne, at any rate, expresses the opposite point of view—that honey is good enough as the Lord gave it to us and it needs no fixing to find its own proper market.

many ways, and the vegetables and fruit eaten with relish in the tropics are very different from the blubber preferred by the Esquimaux.

The tropical banana and the northern apple are both fine fruits—but so different! Neither is condemned because of its place of origin, but the exchange of these products means millions of dollars of business each year. There is no conflict—they are different, and I think that here lies the secret of the condemnation of our southern honey—IT IS THE SAME.

National advertising will help honey sales. The bottler who packs a clean, clear, uniform color of honey with a good flavor will make the sales provided that he advertises his particular brand and keeps it before the public. White, yellow, amber, or even red will make no difference—just a flavor, mild or sharp, delicate or strong, approximately the same at all times, and people will cultivate a taste for that particular honey and demand it. The writer is bottling amber honey for the New Orleans retail trade—uniform in color—and his demand is growing steadily and his pack has replaced white honey in many retail stores.

One particular store has repeatedly refused to handle this honey. They are specializing on Greek thyme honey at \$1.50 per pound and—believe it or not—buckwheat honey in little brown jugs at \$1.00 per pound.

Why should national advertising of honey specify any color or flavor? Why should national sales agencies

be created? Local presentation should be able to dispose of local products, and local publicity should create a consuming demand. Kellogg's advertising has us all eating horse feed—corn, oats, bran, and shredded wheat looks like hay, but we enjoy it now, and are probably in better health because we do so.

National, regional, or even state unification in marketing seems to be impossible of achievement—and it is well. Limited organization in selling is desirable; individual producers seldom put up an attractive package of uniform quality, but the creation of a monopoly usually spells disaster to the little man—and the little man is an important item in this free country of ours. His right to produce and market is only limited by his ability, and his success depends on how well he meets the desire of his customer.

Honey sales are generally reported as slow. With a production of just about two pounds per capita, we are forced to look for foreign markets for our "surplus." Instead of trying to boost sales by arbitrarily disqualifying good honey which happens to have an "attractive color," we could arrive at better demand and higher prices in a short time—if every producer would develop his local market until it absorbed his output and called for more. Then surplus producing areas would have real demand for their local overproduction and the void would be filled with satisfaction on both sides.

This is not a dream. This has been done, and is being done again, in many sections of the South. Local grocers are keeping honey before their customers—and they buy it. Roadside stands are attractively displaying honey—and they sell it. Customers come; customers see; customers are conquered—and they eat it. Louisiana's dark honey is being sold.
Louisiana.

for April, 1931

Selection Within the Italian Race for the "Best" Bees

By Morley Pettit

THE editor has asked me to say something about races of bees, and I must confess that my experience has been confined mostly to Italians, Carniolans and blacks—yes, and Cyprians.

Suppose we dispose of the last named first. It was years ago, when a boy in my early teens, that we had one corner of the apiary contaminated with those golden, fiery little individuals. Friends of the race have contended that Cyprian bees are kind and gentle, and that their bad reputation is given them by their crosses. That must have been what we had, for they certainly were cross, and the smoker had to be well primed when we undertook to open their hives. Ever since those early days certain peppery strains of so-called golden Italians have assured me that they had acquired their disposition along with the red-gold crown on the prothorax from some Cyprian ancestor.

Common black bees of America have about as many variations as any other race. I have handled what the southerner calls "little old swamp bees" that were about as worthless as flies, and have worked bees that, though coal black, were large and gentle, with big, strong, vigorous queens which I could not distinguish from Carniolans. Before getting my Georgia apiaries all Italianized, some of these black colonies would amuse as well as exasperate us, for when we undertook to find their queens before shaking them into packages for use in our Ontario apiaries they would all run away; then, after we had given up and gone on to their more quiet neighbors, they would come back and continue storing honey. The result was that they filled their supers with beautiful white-capped honey, far outstripping those hives of peaceful yellow bees which allowed themselves to be enslaved and exported.

A few years ago, after finishing package shipping late in May, we wished to save time and expense in requeening an apiary before going north for the summer. Most of the colonies were well marked Italians, so we just killed the queens and left nature to take its course. My summer caretaker made sure later that none were left queenless, and when we returned on a warm day the following January they met us at the gate. That is said in a joking way, but it was no joke until we got our veils on. The young yellow queens had mated promiscuously, and along with a bunch of very cross bees we had enough variations of inherited

characteristics to demonstrate the whole Mendelian theory. The colonies were all strong and running over with bees which ranged all the way from well marked "Italians," that would run just like blacks, to coal black "niggers" that would remain quietly on the combs and showed every characteristic of pure-bred Italians, except color.

This and similar experiences have led me to ask seriously: What is an Italian bee? The only answer the trade requires is that it has three yellow or leather-colored bands on the abdomen. That means about as much as the color grading of honey, yet it is something to go by, and we have to have that. If an Italian bee with its distinctive markings is so hard to define, how in the world can we distinguish Carniolans and Caucasians and all the other darker races whose main difference from common blacks is that they are grey? I have seen what the layman would swear were Carniolans or Caucasians in the hives of Georgia people who had kept bees for generations and still had vague notions of a "king" ruling in the "gum." The odd-race-bee enthusiasts may ridicule my ignorance of their favorite grey bee, but I defy any ordinary commercial beekeeper to distinguish some black bees that never heard of Europe from the second or third cross removed from the best European grey bee that ever gathered nectar and pollen.

To hark back to boyhood days again, my father produced some fancy comb honey each year, and when I say "fancy" it is not in the language of any modern grading rules. It was honest-to-goodness FANCY—smooth, white, and sealed solid to the wood of the section all the way around. He kept Italian bees, but bought a few Carniolan queens occasionally. They swarmed themselves to death in the first generation, but after mixing with the Italians they produced a strain which stored more honey and capped it whiter than the average Italian colony. From time to time in later years I have tried a few Carniolan queens, but always with disastrous results. Perhaps I did not get the idea, but twelve-frame Langstroth, ten-frame Jumbo, and double ten-frame Langstroth brood chambers all gave the same result—excessive swarming as soon as they came near up to strength—and I gave up in disgust.

I know it is heresy to talk of preferring anything but pure-bred bees, but for all-around vigor and a big crop of honey, give me a good Italian

queen mated with a drone that is strongly mixed with black or grey. Such a queen will build up her colony faster in the spring, or the workers will build it up for her—whichever way you have a mind to take it. Being of good color, she is easy to find. Her bees will be snappy, but what of it? We don't keep them for pets any more, but to make honey; and they will make it if the nectar is to be had, and they will defend it more vigorously against human as well as other thieves. Of course, we want our bees to be reasonable, but we do not keep them in the kitchen garden any more to impose on the overworked housewife, asking her to watch for swarms. We keep them in the back pasture, often far from human habitation, where they can be cross if they like, so long as they make lots of honey and save it until the owner arrives to take his share.

Bees have been bees for more centuries of years than the human mind can grasp. Different climates and environments have developed distinctive characteristics of color and behavior. Artificial as well as natural selection have produced leading races which we call Italian, German, Cyprian, Carniolan, Caucasian, and so on. By continued selection within any one of these races, and by seasoning, flavoring and coloring with ingredients from other races, a careful and deliberate breeder is able to develop and maintain a strain of bees having many of the most desirable traits.

In America we have long accepted the three colored bands on the abdomen as the trademark of what we have chosen to call Italian bees because similarly colored bees were first imported from Italy. Bees so marked are by far the most popular and probably always will be. They are good to look at. The queens are easy to find. The best strains of them are good workers and not excessive swarmers. They remain fairly quiet when combs are manipulated. In short, the best all-around bee may be bred by selection within the Italian race.

A New Bee Book

"Beekeeping New and Old" is the title of the largest book on bees so far published. It is by W. Herrod-Hempsall and published by the British Bee Journal of London, England. Volume one contains 772 large pages and 708 illustrations. A second volume will later be published.

A book of such large extent must of necessity sell at a high price because of the great expense of publication. We understand that it will sell at \$7.50 per volume.

There is a vast amount of information concerning beekeeping in Great Britain and much interesting

history of the development of equipment and English management. As would be expected, the book is decidedly English in its viewpoint and has little to say concerning American conditions and methods except in criticism.

Since the reviewer has a viewpoint directly opposite to that of the author, it is a bit difficult to do the book full justice. To find large hives spoken of as "monstrosities" is not calculated to arouse the enthusiasm of one who is an advocate of large hives. In like manner several other things which we regard as correct practice are condemned. We might quote at length subjects with which we disagree, but it is not our purpose to be critical and to overlook the merits of the publication because we cannot agree with the author on all points.

The most interesting part of the book is that portion dealing with the production of heather honey. Many beekeepers move their bees to the moors, where they secure a honey of such heavy body that it is difficult to extract from the combs.

Those who wish to be fully informed concerning beekeeping in Great Britain will want this book and its companion volume later to be issued. Copies may be secured from the American Bee Journal at the publisher's regular price.

Arizona to Regulate Use of Spray Poisons

A bill was introduced in the Arizona house which seeks to regulate the spraying with poisons and the use of disinfectants. It also requires seven days' notice to the beekeepers of intention to spray. This is as it should be, for why should we let the little fellows go forward to what we know is certain death or a painful illness when we might avoid both?

J. B. Dillon.

How to Control Ants

In this climate (Louisiana) we are bothered with insects, termites, ants, etc., which, together with dampness, soon ruin bottom boards. On account of Argentine ants especially, bees have to be kept off the ground and in some way isolated from the travel roads of the ants.

After trying several schemes, most of us have settled on an inverted common tin pie pan over a post of the scaffold, between it and the railing that holds the hive. By inverting, it turned the rain from the inner side, which was greased with a coating of stiff grease. Ants cannot walk over this, and by keeping down grass, twigs and renewing the grease they are effectively isolated.

However, the posts rot off and the

Well Fed Package Bees for the Orchard



The special orchard package has a five-pound can of syrup and in addition a compartment at the end which is filled with candy.

The shippers of live bees are making some extended experiments to secure a foolproof orchard package. Many fruit growers are afraid of the bees and will not give them attention, even so much as to feed them. They demand that the bees must be ready for business when received.

We are showing pictures of a trial package just received from the Stover Apiaries in Mississippi. This package contains a five-pound can of syrup and in addition has a compartment at the end which is filled with

candy. The second picture shows how the package is protected merely by wrapping in paper. All that remains for the fruit grower to do when the bees arrive is to wrap the packages in paper, set them down in the orchard and open the flight holes.

Except for the candy compartment, this package differs but little from those in common use by live bee shippers generally. The kind of wrapping depends upon the man who receives them, but tar paper would furnish protection for a much longer time than newspapers.



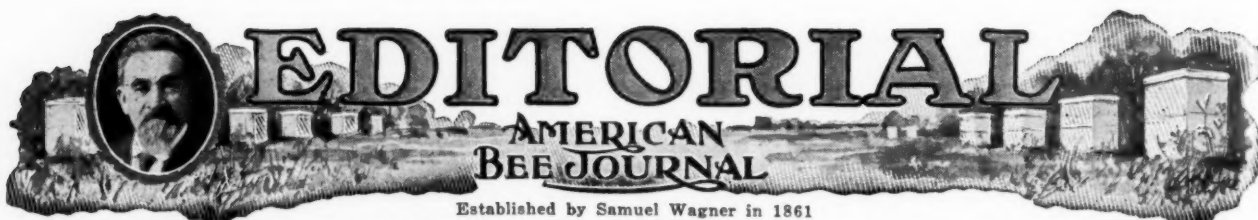
Package wrapped in paper for protection in the orchard

whole thing falls down once in a while, so some of us decided on concrete stands reinforced with stiff, heavy wires. These weigh approximately fifty pounds each and if well made and well reinforced can be picked up and hauled from place to place with the bees. They are easily made in a plain board form which

can be used over and over, and, by a little management, at odd times a few can be set and one never be bothered about a shortage.

A common two-by-four piece of lumber sawed up in blocks four inches long will make blocks to lay on top to invert tin pans over.

Jes Dalton, Louisiana.



Established by Samuel Wagner in 1861

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Low Prices

Beekeepers generally are feeling the effect of low prices for honey. Fortunately honey is not selling as low, proportionately, as many other products. Based on the Liverpool market, wheat is said to be lower in the exchange value for other commodities than for more than three hundred years. Cabbage has sold as low as \$4.00 per ton in the winter garden region of south Texas; carrots in the same region as low as 15 cents per bushel and beets only about a nickle higher.

Vegetables are perishable and must go to market when ready. If there is no demand, the grower loses. Fortunately both honey and beeswax will keep and may be held in hope of better prices.

No matter what kind of foodstuff one happens to produce, he is likely to find slow demand and low prices just now. Much has been written about cheap dairy products, cheap eggs and low priced grain. If other things fall as low or lower than honey, the beekeeper can exchange his product for the things he needs on favorable terms after all. Everything considered, we feel that the honey-producing industry is in as favorable a situation as any agricultural product, with a very great advantage in the fact that this is not a perishable product which must seek immediate market.

Maple Sugar

Maple sugar is the one sweet which would be expected to come into competition with honey. It has a highly characteristic flavor, which is its chief attraction. Unlike honey, its output has not increased to any large extent and the price has remained relatively high. Production of maple sugar and maple syrup is confined principally to the northern United States and eastern Canada. Government figures give the value of maple sugar and maple syrup produced in Canada as slightly above five million dollars last year. About one-fourth of the output was sold in the form of sugar and the rest as syrup.

Chilled Queens

The worst drawback to the queen and package business is the large percentage of supersedure of queens. Purchasers of queens, whether or not they come with live bees in packages, suffer great loss through supersedure during the honey harvest. When a queen is superseded at a critical period several weeks must pass before the colony gets back to normal. When 20 to 30 per cent of the queens are thus superseded the profit is reduced to the point where the beekeeper questions the wisdom of his purchase.

The writer is inclined to the belief that this high percentage of supersedure is caused by chilling of the queens at some period of their life. The queen breeder cannot exercise too much care in his operations to make sure that no chilling occurs. Some breeders have small grafting houses where the cells are prepared, others do the

work in the open air. In cool weather the delicate larvae may be chilled when the operator is unconscious of the fact.

Queens may be chilled when removed from the mating boxes and placed in the cages. They may be chilled at any time after being placed in the cage and before the cage is placed in the hive where the queen is to remain.

There is room for much improvement in queen breeding practice in this particular. Falling prices make it necessary for the breeders to seek short cuts which will save cost. It must not be done at the expense of chilling the queens, or the demand will be further reduced because of disappointing results.

Sea Farming

There are so many new factors affecting agriculture that it is very difficult to anticipate where our principal competition will arise next. Until recently our exports of lard to Europe furnished a very important source of income for western farmers. Germany was one of the best customers. Of late whale oil is replacing lard to a very large extent in foreign, especially German, markets. It is estimated that the output of whale oil has increased more than 500 per cent since 1921. Last year the sea furnished more than 2,500,000 barrels of whale oil. This has replaced lard and other animal fat very largely in the manufacture of soap and also in butter substitutes in European markets.

While this condition very remotely concerns beekeepers, it is mentioned here as an example of the changes that are taking place in every industry. We must find new uses and new outlets for honey and beeswax if we are to continue to prosper. Those industries which are finding new outlets are expanding and prospering, while those which fail to do so must surely decline because of new competition.

Who could have believed that the sea would furnish competition of such serious nature as to depress the market for hogs and thus affect the value of Iowa and Illinois land?

Such changes certainly emphasize the importance of the American Honey Institute and indicate the need of more funds to extend its opportunity for investigation as well as advertising.

Milk and Honey

A few days ago a letter came from an important organization interested in dairy products asking for information concerning milk and honey drinks. Fortunately the American Honey Institute has paid special attention to this combination and the enquiry was sent on to them. Without the American Honey Institute we would have been unable to supply the necessary information. This is an example of the hundreds of contacts which are being developed for the beekeeper through the Institute.

A speaker at the Toronto convention made the statement that there is no place for honey in the kitchen; the place for honey is on the table. Evidently he is uninformed as to the extent that honey is used in cookery in Germany and other European countries. The place for honey is wherever it can be used to better advantage than other products. It is true that honey has been suggested for many uses to which it is not well adapted, but there are many food combinations in which honey finds a useful place. Other industries have profited by seeking out such new outlets, and beekeepers must do likewise.

Better Times Ahead

A recent number of Country Home contains an interview with Roger Babson which offers much encouragement in a time of gloom. Babson is one of the most famous economists and he has an uncanny way of anticipating coming events. He warned his clients of the break in the boom in 1918, and again in 1929 he advised them to get out of the stock market to avoid a disastrous break. Both breaks came and those who took his advice profited thereby.

Babson's recent interview is refreshing in that he says that 1931 is likely to be a good year for agriculture. The prices of goods which the farmer must buy have fallen to the level of the prices of the crops he sells. Since the farmer was the first to suffer with the coming of the depression, it is anticipated that he will be the first to recover.

We are pleased to note the optimistic trend of the letters coming to the editor's desk. While it is true that many write that times are hard and money scarce, most of our correspondents indicate that they expect to carry on as usual and will bend every effort to secure a maximum honey crop this season. Certainly we must recognize that the dollar we get for our honey will buy more food, clothing and other commodities than last year's dollar would do.

Keep the Bees Well Fed

This is the time of the year when the bees do the greatest amount of breeding. In all of our Middle West the colonies must increase if we wish to have a honey crop. In dry seasons like that of the past year, the plants that furnish honey have not grown as they should. There is very little white clover. But it is the more important that our colonies should be strong in order that they may take advantage of whatever may present itself. Black locust, basswood and other blossoms may prove good, but they last only a few days and the bees must be prepared to derive benefit from their yield. So the colonies must be strong. April is an important month for breeding. Plenty of food is needed.

Beginners in beekeeping are apt to imagine that the bees harvest large quantities of honey from fruit bloom. But if we examine the bees just after the peach and apple bloom have disappeared we will find usually but little fresh honey in the cells. Too few field workers and too much brood to feed is the cause.

The eight-frame Langstroth hive, which used to be the standard, has long ago been recognized as too small. Nowadays the owner of such hives has adopted the modern custom of supplying them with a "food chamber," a second story filled with honey, partly at least. This does away with the necessity to feed, but it must have been saved from the previous year's crop. In hives with large frames, like the Quinby, now called the Dadant, there is more room for surplus in the brood combs and the bees are less likely to be short, especially if the hive contains ten frames.

But even with those large hives, spring supplies may be needed. Examine your colonies and make sure that they are not short. The food given may be much more watery than that given in the fall in preparation for winter. In fact it is well that it should be watery, as much water is needed in brood rearing. The mature bee does not need water, unless it be to dissolve food that is granulated or too thick. But for brood rearing the bees need plenty of water, as one may see when one goes about the springs, ponds and watering troughs of the vicinity. It is a good plan to save the bees so many trips to the ponds, by supplying them with watery food. Four or five pounds of sugar to a gallon of water is a plenty for spring feed.

The beekeeper who has no near neighbors and tries to feed his bees out-of-doors may do so without much danger of attracting other bees, if he makes a very light syrup, two or three pounds of sugar to the gallon of water. The bees must be baited to this, but after they become accustomed to it, it proves very satisfactory, for it does not cause the excitement and the robbing caused by heavier feed and is very good for brood rearing. It is supplied in tubs or large vessels, with floating sticks over the surface of the water, to keep the bees from drowning.

We had very good evidence, accidentally, in the old days, of the need of a large amount of food in spring. When we first began to make large hives with ten or eleven D size combs, we at first thought that the amount of honey which they placed in the brood chamber was more than needed. The leaders in beekeeping said that twenty-five to thirty pounds of honey was sufficient for winter. So we used to extract the honey out of two or three of our brood combs just before putting the bees in winter quarters. Accidentally, we had a few colonies which had been hived on empty frames and had built their combs crooked. It was not customary at that time to use full sheets of foundation, so those colonies with crooked combs, if they had not been transferred during the summer, must necessarily be left with all their combs, all their honey, for winter. We soon ascertained that those colonies which were left with fifty pounds of honey, instead of twenty-five pounds, proved by far the best for the honey crop, as their bees had not been compelled to stint in the feeding of the brood during the spring.

This showed us plainly that we must keep the bees well fed while they are rearing brood. It pays to do it.

Blending Honey

Arguments have been produced, in the American Bee Journal, both against and for the blending of honey to make it uniform. We believe that the advisability to blend honey depends much upon the circumstances in which one finds himself.

The dealer in honey, who buys honey from all directions, usually finds it best to blend it, for it is usually impossible for him to sell a large quantity of the same flavor and color. But the producer who produces thousands of pounds of one grade of honey usually does not find himself able to blend it with any other honey with satisfaction. For instance, we have often produced as much as 50,000 pounds of clover honey, practically pure white clover. Then, when fall comes, we harvest 20,000 or 30,000 pounds of autumn honey, strong in flavor and dark in color. Would it be worth while to blend the two together, or is it better to train the consumer to distinguish between these two kinds?

We believe that consumers of honey soon learn to distinguish between different grades, even although many prefer the darker honey through a prejudice which leads them to believe that the light-colored, mild honey is impure. We will not sell much honey until we educate the consumer to know white clover honey, basswood honey, goldenrod honey, etc.

Selling Honey

The Beekeeper's Letter, published at East Lansing, Michigan, for the first quarter of 1931, contains a statement concerning "cloudy honey." It suggests that perhaps honey which is cloudy because of containing air bubbles may have been too much agitated in passing through a honey pump. This suggestion of air in the honey has already been made by the editor, who objects to the use of a honey pump on that score. When honey is pumped it is bound to receive quite a great number of air bubbles, which can only do it harm. It ought to be possible to transport honey without the use of a pump. We always let our honey run by gravity from the extractor to a tank and from that tank to packing receptacles.

It seems to us that neither the beekeepers nor the public appreciate the value of honey as fully as they should. Is not honey the very best of sweets?

What name does a mother use in speaking to her darling baby? Honey! Oh, my sweet honey! What name does the lover use when speaking to his sweetheart? Honey! My darling honey!

Why? Because honey is the best, sweetest, healthiest, most wholesome of all the products of Nature. They do not say: My sugar! My candy! for honey is better than sugar or candy, since it is a pure product of Nature and not artificially made. The only requirement is to convince the people that the honey which we harvest is true honey. Whenever we do that, there is an unlimited demand for it. It must be pure and as near its natural condition as it is possible to produce it. If this is clearly proven, there is no limit to the demand for it.

Is Something Big About to Happen in Beekeeping?

By M. N. Dillon

President Michigan Beekeeping Association



The Dillon home and one of the apiaries.



As president of the Michigan Association, Mr. Dillon represents one of our biggest and strongest groups of beekeepers. A large beekeeper himself, and an outstanding developer of his own honey markets, he gives us some ideas from a wealth of experience that should cause thought and serious attention.

It is true that social and economic changes come about so gradually and unseen that we do not know they are coming till they are here. We do know that we are in the midst of a great economic and social revolution. It came first in industry. Machinery made it possible to combine the work of many small shops into a single great factory which did the work much more cheaply. Then the same forces began to show themselves in distribution. We all know too well the story of the independent merchants everywhere who became the clerks in the chain stores. Banks are consolidating, railroads are consolidating, schools are consolidating, and the end is not yet. Only agriculture has stood out—and how? But the same forces are at work from within and without. A few brave souls have already pioneered and shown the way to efficiency and profit through bigger and more specialized farms. Low prices, abandoned farms and big farm machinery are facing an issue.

Beekeeping has developed as a small side line to a small business and is still small business. But its technique has developed wonderfully, even to the point where production has outstripped demand, and we are all agreed that something must be done, and it is being done now—but what?

The economics of the situation indicate that we cannot look for a return of high prices to solve the

problem. The only other way to profit is cheapen production.

The American Honey Institute with its propaganda will help, but all they can do will not save the industry from the onslaught of cheap sweets unless beekeepers use every means in their power to reduce the cost of production. Distributors must also

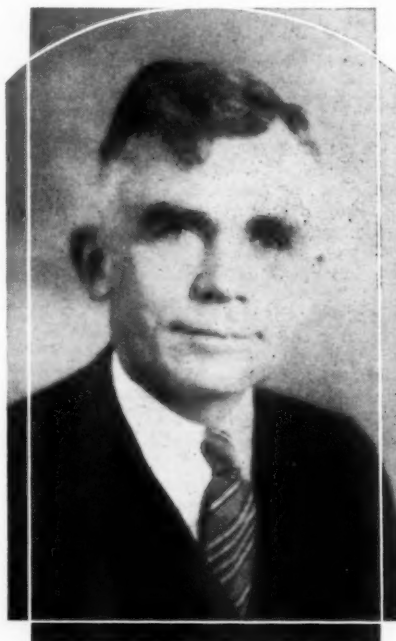
find a way to increase the efficiency and reduce the cost of getting a pound of honey to the consumer's table. Who can say the solution is not to be found where it is being found for so many other products of industry and commerce—mass production?

The tide is most surely flowing in that direction, and all we beekeepers can do is ride the tide to specialized large scale production or drift into the eddies and be eliminated.

When the oldest of us were boys, a colony or two of bees could be found on the majority of farms, but when Moses Quinby marketed a few tons of honey it was incredible. Now not more than one farmer in ten keeps bees, and when he does the bees are more often a liability than an asset. Yet hundreds of beekeepers measure their crop in carloads.

Twenty years ago there was only one beekeeper in my home county with more than one hundred colonies, and he was a "honey king." Now there are no less than twenty beekeepers with one hundred to seven hundred colonies.

It is no longer profitable for a family to produce its own honey any more than it is profitable to make its own clothes or butter or cheese, or make its own bread or raise its own tobacco. (Home brew may be an exception.) Side line beekeepers are learning that, when time is considered, they can buy better honey from



M. N. DILLON
President Michigan Beekeepers' Association

the specialist for less money than they can produce it.

The movement toward specialized production is being retarded somewhat by romance. Many unqualified go into the business just because "bees are wonderful," and they go out of the business for the same reason. Also the idea is general that "bees work for nothing and board themselves"—that beekeeping is all profit. But in the end this is a deep source of second-hand equipment for the specialist.

The economics of the situation will prevail and every year we have more bees and fewer beekeepers. The present low prices of honey are forcing an issue. The men who are producing honey at a loss (and they are legion) must go out of business, and the man who can produce at a profit will buy the other's bees and produce more honey at more profit. "To him that hath shall be given." The small beekeeper must either get in or get out. A lot of men who are keeping bees because they are wonderful ought to be selling honey because it is wonderful.

It is argued that because the average beekeeper is not able to handle men and money and big business, large scale production cannot become common; but it came in industry and merchandising for that very reason. With a million beekeepers and a few of them dependent on it for a livelihood, it is almost impossible to get any organized effort in support of the industry—instance support of the American Honey Institute. The small producer is also often a menace to the industry. He spreads disease, cuts prices, and puts an inferior product on the market. We small beekeepers don't like the idea of losing our independence in business any more than the mechanic or the storekeeper, but I think it will work out that we will be more prosperous as employees and stockholders of Bees and Honey, Inc., than we are as sole proprietors.

Joubert Finds Glue Mistaken for Honey

Although "help yourself" roadside stands are not often the prey of dishonest wayfarers, in the opinion of Mr. J. P. Joubert, who operates a "take the honey, leave the money" stand on the Mount Rainier highway near Enumclaw, Washington, it may sometimes be of advantage to use decoys to circumvent less discriminating thieves. Mr. Joubert was surprised to discover, upon going to his stand one morning, that an inebriated passerby had drunk several ounces of label glue by mistake when sampling the contents of the stand.

Ready for Increase or to Replace Losses



Above is a nice shipment of packages as the northern buyer likes to see them come: quiet clusters, no loss, full weight, neat shipping. This is the son of M. N. Dillon, Gordon P. Dillon, of Fruit Ridge, Michigan.

What Have Weather Guessers in Store for California?

The bees are actively at work in preparation for whatever honey crop there is to be in the season of 1931. Although the amount of rainfall in many parts of California is still far below normal, recent storms have brought out the vegetation very rapidly. The sage ranges along the coast have taken on a freshness in appearance that holds the promise of good growth and development. Whether that promise will be fulfilled in a good crop of sage honey will depend on the amount of rainfall and weather conditions during the next three months.

It is interesting to read the widely varying opinions of scientists, weather prophets and just ordinary guessers as to whether the year will be wet or dry. Most of them lean strongly toward the opinion that the year will be wet. Maybe the wish is the father of the thought. Those who examine the rings of growth in the trees say that the time for a wet period of ten years has arrived. Those who examine the weather reports for the past sixty years, or more, say that there are no evidences of cycles in these reports. The majority of us have to be content with saying that we don't know a thing in the world about the weather, and couldn't do anything about it if we did. But all of us who are alive ten

years from now will know whether or not the wet cycle, if there is such a thing, has arrived.

The bees act as if they thought there was something to work for. They are rolling in the pollen and rearing brood at a great rate. Maybe the bees are just as scientific and reliable as the wisest and most learned of the earth's human population, when it comes to understanding the weather. At any rate, the beekeeper who follows the lead of the bees in making preparation for whatever is to come will find their leadership more reliable than any record of the past.

R. B. McCain.

One Ten-Frame Hive Too Small

Ten frames of Hoffman size are not large enough for a good queen in the spring, "in this locality." Unless the bees have more room, they hang out all over the front of the hive and start swarming preparations. But two stories, with eighteen or twenty frames, will provide room for any queen. Therefore, I "fall" and "winter" in two stories.

When I kept fifty colonies in Langstroth-size ten-frame hives in Glenview, Illinois, twenty-five years ago, I bought all the swarms of a farmer-beekeeper who kept about the same number of colonies in Quinby hives, with deep frames. His bees always came through the winter stronger than mine, although they were not packed, while mine were packed. The deep frame, with the extra honey capacity above the brood nest, made a great difference.

S. F. Haxton, Pennsylvania.

(Yes, the deep frames are better.—Editor.)

Say It Short and Sweet

An automobile publicity man found that automobile editors favored the four- and five-line items which he sent them and his car was mentioned more frequently than those for which the publicity men sent column-long stories. Besides, readers took time to digest the small paragraphs. There is a suggestion for all honey marketers to follow in supplying information to their local newspapers. The Iowa State College, at Ames, uses the plan in supplying material for the papers in that state to reprint. Here is a specimen which that school recently sent out:

"Honey contains vitamins and small portions of practically every mineral used by the human body."

That's extracting the good stuff, isn't it?
F. H. Madison.

Pioneering in Saskatchewan

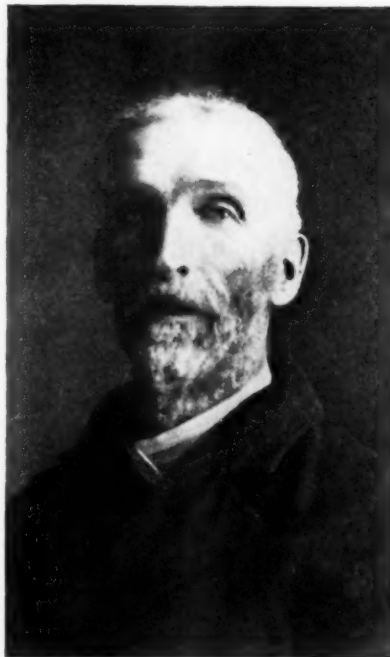
By R. M. Pugh

WITH a record crop of 685,000 pounds of honey produced last summer, Saskatchewan is coming to the fore as a beekeeping province. Also, as Saskatchewan honey has been securing many of the highest awards at the Royal Winter Fair, Toronto, within the last few years, the quality of its honey is established.

This is a recent development, for in 1920 successful beekeeping was considered impossible in this province, and the hardy individuals who had a few colonies of bees produced the grand total of some 3,000 pounds of honey in that year. The development of production, within ten years, to a crop of 685,000 pounds is therefore remarkable, especially when it is taken into consideration that the last three years have not been altogether favorable for beekeeping.

Saskatchewan beekeeping development has been largely influenced by the faith, interest and persistent energy of one of our pioneer farmers, the man whom we have come to regard as the "Father of Saskatchewan Beekeeping," Mr. John Hubbard, of Grenfell, who lives in the Park country near the Qu'Appelle Valley, some ninety miles east of Regina. Mr. Hubbard resides on his original homestead and specializes in bees, Holstein cows and sweet clover, and it is from "Stonycroft Farm" that Mr. Hubbard's influence has spread beyond the bounds of his municipality, where he is secretary of the school district and telephone company, to the whole province.

Visitors to "Stonycroft Farm" always receive a hearty welcome from



JOHN HUBBARD

Mr. Hubbard and his gracious wife, and are shown his apiary of sixty colonies of bees, from which he secured an average of 140 pounds of honey per colony last season—a poor season in his district.

Born in eastern Ontario in 1876, young John Hubbard attended school at Uxbridge. At sixteen years of age he left for the West and was soon settled on a homestead near Grenfell. This was in the year 1892 and young Hubbard went through

all the trials and hardships of the early homesteaders on the prairie. By 1907 he had prospered sufficiently to marry Miss Ellen Sim, the daughter of a neighboring farmer.

In his reading, Mr. Hubbard happened on "Langstroth on the Hive and the Honeybee" and became absorbingly interested in the tale which it told regarding the life and habits of bees, and in 1917 he procured his first colony from a beekeeper near Winnipeg, Manitoba. Unfortunately, these bees proved extremely cross and unmanageable, and a less enthusiastic and interested person would have ended his beekeeping experiences then and there. John Hubbard, however, decided that surely there must be quieter bees than these, so, the following year, he sent in the opposite direction and procured a hive of bees from British Columbia. These bees proved gentle and easy to handle and beekeeping took on a new interest.

John Hubbard's neighbors regarded him as a little bit "off" concerning bees and would inform him that it was ridiculous to suppose that bees could thrive in Saskatchewan; there was too much wind and the bees would all be blown away; the winters were too severe and, even if the bees were not blown away or frozen during the winter, there was not sufficient flora for them to gather honey from. Mr. Hubbard was determined to prove or disprove this to his own satisfaction and persisted in his beekeeping, receiving no instructions except from the books which he could secure on the subject.

Many "ups" and "downs" were experienced during the early years. One winter all colonies but one were lost. However, the apiary was gradually increased in size until, in 1921, the tremendous amount (for that time in Saskatchewan) of 1,000 pounds of honey was produced. From then on the apiary was rapidly increased up to sixty colonies, at which number it has been maintained.

As the district is adapted to mixed farming, a fine herd of Holstein cows has been developed, for which considerable sweet clover is grown for hay, and this furnishes excellent bee pasturage.

When the apiary was small, the bees were wintered in the house-cellar. However, lack of room and spring floods made it necessary that more adequate provision for wintering be made, and now a modern bee cellar has been provided.

Mr. Hubbard, being of a mechanical turn of mind, makes all the necessary bee equipment in his own well-equipped workshop.



Part of bee yard—August, 1927

As the bees of "Stonycroft Farm" became known throughout the district, interest in them gradually spread until, during the summer, there was a stream of visitors to the apiary. Mr. Hubbard decided that if so many people were interested in bees he could best assist them by having a bee meeting, and annual beekeeping field days were instituted on his farm, to which visitors from points sixty to one hundred miles off would drive. Through these field days numerous people in various parts of the province were started in beekeeping.

In 1923 Mr. Hubbard felt that the beekeeping possibilities in the province should be brought more directly to the attention of the public, and, with this object in view, arranged a display of bees, honey, wax and honey plants at the Regina fair. This exhibit attracted so much attention that Mr. Hubbard was invited to again exhibit the following year and was given assistance in arranging his material. The exhibit formed the center of attraction to the few beekeepers attending the fair, and a beekeepers' meeting was called, at which a provincial association was formed with Mr. Hubbard as president.

Under Mr. Hubbard's guidance the association prospered and was instrumental in having the Apiaries Act passed in 1924. Later, when beekeeping had developed sufficiently, it requested that the Government appoint an apiarist, and this request was granted in 1927.

Beginning with twenty members seven years ago, the Saskatchewan Beekeepers' Association has developed to an active membership of 342, under the continuous presidency and guidance of Mr. Hubbard. In 1930, when his requests to be released of the presidency were heeded, the Association showed its recognition of his outstanding work in promoting and developing beekeeping in Saskatchewan by making him its first honorary life member.

Metamorphosis in the Honeybee

This is the title of an article by Dr. Everett Oertel of the Southern Field Station at Baton Rouge, which appeared in the second issue of the fifth volume, December 5, of the *Journal of Morphology and Physiology*, published by the Wistar Institute of Philadelphia. It is a lengthy treatise, going into detail on this subject and of interest mainly to other scientists. Those interested in institutional laboratory work or classroom information should obtain a copy from the Wistar Institute Press, Philadelphia, Pennsylvania.

The Southern Conference of 1931 at Montgomery, Alabama

IN spite of poor roads, the attendance at this conference was remarkable. There were well over a hundred beekeepers from eighteen states and Canada, with a large number of the Alabama shippers and those of nearby states present—complete harmony and satisfaction; every state working together in the same spirit.

To give an account of the addresses would occupy several pages. The only way to get full benefit from such a meeting is to be there yourself. When beekeepers are willing to travel hundreds of miles to attend, it indicates the turn in interest which is taking place.

Shippers reported conditions excellent and bees ready to start the season. Low prices for bees and queens disturb many who feel they cannot now produce at a profit. They face the same complex readjustment which is making it necessary for American producers to win buying by lower prices. We hope, however, that the prices will remain at a level

so the breeders can continue to make prosperous this necessary part of beekeeping.

The evident tendency toward standardization in management, equipment, and price is in the right direction. The leaders of the South still feel that northern honey coming from states with disease and finding its way on the southern market is dangerous to their interests. On the other hand, the package producer finds his bees on combs barred from many states in spite of the fact that disease is not present where the bees are produced.

There should be some way out of these cross purposes. There is talk of demanding honey certification at the points of origin. As suggested by Professor Anderson of Louisiana, the best way to a solution will probably come from a common conference between inspectors of the North and South.

Southern beekeepers also feel that they have a problem in the unfair (Continued on page 183)

Bees Do Make Honey in Western Canada



So much interest continues to be manifested in beekeeping in western Canada that we are reprinting a picture from our April, 1927, issue, showing a colony of bees on scales at Beaver Lodge, in northern Alberta. During August of 1926 this colony

made a daily gain of 7.7 pounds. The largest gain in one day was 20.5 pounds. The gross weight of the colony was 550 pounds. The surplus for the season was reported as 281 pounds. Probably by this time the Peace River country could give us some better records than that.



An aerial picture of the gardens. Some buildings have been added since this picture was taken. The houses nearest are the newest. U. S. Highway 41, the Dixie Bee, can be seen beyond the Gardens.

With the Bees in the World's Largest Greenhouse

By Carl E. Killion

THE Davis Gardens, the World's Largest Greenhouse, is located in the southern edge of Terre Haute, Indiana, on South Seventh Street, just east of U. S. Highway 41. The imposing glass structure fills one with wonder at its size. From the air it looks like a large lake. Its location makes it one of Terre Haute's most beautiful points of interest. Its wonders are not fully realized, however, until one enters the great houses to see the interesting things that happen in this city of glass.

Mr. J. W. Davis is president of "The Davis Gardens," and Mr. Keith Owen is manager of the Terre Haute plant. I met Mr. Owen in the office. He is a very pleasant gentleman. He gave me much of his time in discussing the gardens, and introduced me to Mr. Orville Myers in charge of the bees.

The gardens cover 75 acres, 34 under glass. A list of materials compiled before the erection of the last 20 of these glass houses includes 300,000 panes of glass, about 40 carloads. Seventy-five miles of pipe for heating alone, and an additional five miles for watering. Two hundred carloads of greenhouse construction material, sash bars, ventilating machinery, etc. It took over 700 miles of sash bars to hold the glass. Five thousand yards of concrete were used. Fifty tons of putty disappeared in laying the glass, and 5000 gallons of paint for weather protection.

These new buildings are 40 feet wide and 700 feet long. The older buildings are 80 feet wide, 27 feet high, and 600 feet long. A total of

38 glass houses in all. Three houses 40 feet wide by 400 feet in length are used as a nursery for young plants. Here the seed is planted, the young plants re-potted until they reach the proper size and strength, then they are placed in the larger house.

The gigantic heating plant has four 600 horse power boilers to generate an adequate amount of heat. They are capable of maintaining a temperature of 70 degrees at night when the outside temperature is 20 below zero. During a warm winter day 50 tons of coal are burned. On extreme cold days 300 tons may be used in 24 hours.

The three main crops from the gardens are cucumbers, tomatoes and mushrooms. My visit of today (February 12) found the entire 34 acres in cucumbers. No tomatoes were to be seen. Mushrooms are grown in cellars, three of them, each 300 feet long.

The cucumbers are distributed over the entire United States, Canada and parts of Mexico. One shipment is known to have gone as far as Alaska. They even go into the heart of the South, and into California to compete with the freshly grown vegetable there.

Leaving the office, Mr. Meyers, my wife and I passed through the grading, packing and shipping room. Cucumbers fresh from the vine are carefully graded, according to size and smoothness, into seven different grades. All are packed 24 to a box and placed for shipment.

From there we stepped into the land of cucumber vines, blossoms and bees, and into a 90 degree temperature. In rows the entire length of the houses, six to eight feet in height, were the vines, covered with every size cucumber from 8 inches down to big yellow blossoms. Bees were darting here and there from one flower to another, doing one of the most wonderful jobs in the world; completing the work man cannot do after he finished the "World's Largest Greenhouse."

The staminate or male flowers open first and are larger than the pistillate or female flower. The latter can be told readily by noting the small cucumber already formed as the flower opens.

Mr. Myers uses 200 colonies in the houses, or about 6 colonies to the acre, equally distributed throughout the entire 34 acres; one hive in a place and all on stands about two feet from the floor. The floors are damp from sprinkling and the hives cannot be set right on the damp concrete. The moisture along with the summer heat makes the houses steamy, but ideal for plants.

Combs sag considerably under these conditions and the loss of bees is great, even with the fine care given them. On the first flight after being released many die just from flying against the glass, battering themselves to death. Others get their wings stuck on the wet glass, some get in the water spray and drown. Then the spray material kills its share because it is impossible to prevent the bees from getting the poison.

We climbed to one of the platforms shown in the picture. Here far over the top of vines we could see the entire house, a wonderful view. Many of the hives were plainly visible. Mr. Myers notes the appearance of each colony daily during their stay in the houses. Every colony gets a breakfast of sugar syrup each morning. When a colony is too weak to perform it is removed and a stronger one brought in, so the work goes on without interruption.

This winter apiary work calls for a great amount of labor. It is also necessary to buy bees from local beekeepers two or three times a year to supply the great field force of pollen carriers. The price paid varies from \$5.00 a colony up, depending on the equipment and condition of the colony. They use mostly Italian bees but some hybrids are purchased. Two colonies of Carniolans were bought one year, but flood waters drowned them before they were ever used and nothing could be learned concerning the comparison of the two races with this work under glass.

I asked how many plants there are to the acre. The reply was 3500 with a possible total of 35 blossoms during the life of the plant. Distribute this over the entire 34 acres and you have an idea of the amount of work bees perform in these houses. With the great amount of moisture present almost every ounce of nectar that the bees obtain from the cucumbers ferments soon after storing. I could see no difference between the amount of pollen stored under these conditions and the amount obtained normally in summer.

An important part of the success of this great greenhouse enterprise rests on the shoulders of this adept bee man, and during all my all too short visit with him I found him very friendly and a man certainly capable of carrying on the work in which he



Mr. Orville Myers, who has charge of the 200 colonies of bees

is engaged. Most of us beekeepers manage our bees to obtain honey but Mr. Myers' work is one continuous job of building up colonies to their peak in numbers, only to have weaklings every spring.

We passed through house after house, every one alike, cucumbers, blossoms and bees, with men and women here and there working; some picking, some pruning, some tying vines and others operating the big sprinklers. During the growing season about 250 people are employed in various ways. The humming of the bees gives me a longing for blossom time among my own

bees. One swarm had issued in the glass houses.

Before leaving we were shown the mushroom beds in the large cellars. A treat indeed, down in the darkness where no bees are needed.

As we walked out of the door I looked back at the great glass-covered distance and the one thought in my mind—"The World's Largest Greenhouse," which would be quite impossible without the honeybee.

Lasting Qualities of Wood

Your reply to Pennsylvania, on page 77, February issue, regarding lasting qualities of different woods used in hives, prompts me to give results of a lifetime experience as a lumberman and builder handling all woods used commercially in this country.

Cypress resists decay under trying conditions when used in tanks and roofs, often outlasting the builder.

Soft yellow poplar is not so lasting, but is used for building lumber, also for bodies of vehicles and cistern pumps.

Try using white pine for these purposes and note how rapidly it decays.

White pine is a good building lumber where strength is not required, as it works easily and has been plentiful, but in lasting qualities it is not equal to other woods.

G. J. Fifield, California.



The rows of cucumbers, above, are a tribute to the efforts of the busy bee. At the left, tomatoes rule the garden.



AMERICAN HONEY INSTITUTE

FOUNDED 1928
BEE INDUSTRIES ASSOCIATION OF AMERICA
CHAMBER OF COMMERCE BUILDING
INDIANAPOLIS

DR. H. E. BARNARD, PRESIDENT

Hospitals and Honey

Surely, honey belongs in the Diet kitchens of our hospitals. The convalescent and person with disturbed metabolism will find honey helpful indeed in supplying nutritional needs. American Honey Institute ever since the annual convention of the American Dietetic Association has been stimulating the interest of dietitians to recognize the value of honey in therapy-diet which is definitely indicated by the requests listed below:

Phyllis Dawson Rowe, Dietitian, The Johns Hopkins Hospital, Baltimore, Maryland; Emelia Dahlgren, Supt. The Lutheran Hospital, Moline, Illinois; Adelaid E. Weber, Dietitian, Arnot-Ogden Memorial Hospital, Elmira, New York; Merle Williams, Instructor in Diet-therapy, Barnes Hospital, St. Louis, Mo.; Emma L. Feeny, Instructor in Nutrition, Pratt Institute, Brooklyn, New York; Josephine Sutfin, Dietitian, Essex County Hospital, Cedar Grove, New Jersey.

Honey Is Certainly Getting Popular

Just about every day somebody writes "Did you see this honey reference?" Here are a few recent ones:

Du Pont Celophane Advertisement—full page Saturday Evening Post in colors—November 1. Better Homes & Gardens—recipe for Christmas Cookies, calling for two cups of honey. National House Service of Proctor & Gamble Company Manual No. 17 and No. 31, recipes calling for ½-cup to 1½-pounds of honey. American Cookery November and January. Sunkist Bulletin No. 20. People's Popular Monthly. Woman's World—Recipe for Honey Cherry Cake. Bakers' Weekly—Honey in Fruit Cake. Daylight for Bakers—every issue has contained honey recipes. January Bakers' Weekly—full page ad showing Honey Loaf. Chicago Tribune—Honey in the Menu—also in Tribune Cook Book.

Newspaper clippings containing honey recipes or stories from Oklahoma, Florida, Ohio, Michigan, Nebraska, Illinois, Pennsylvania, Minnesota, Wisconsin, Missouri, Alabama, Arkansas, Colorado and North Dakota were received during December.

Honey in Dry Skim Milk

Amacker Milk Products Company, Stanley, Wisconsin, is much inter-

ested in developing formulas for dry skim milk and honey. The Institute has received a sample of their dry skim milk and as soon as possible will start experimenting with it with the thought of formulating recipes for food combinations for children. Any beekeeper who wishes to experiment with dry skim milk and honey should write direct to Amacker Milk Products Company at Stanley, Wisconsin.

David Running's Flivver Must Have Been a Racer

David Running worked two afternoons in Huron county and pledged \$137 for the Institute. He closes his letter with "I'll help a little; you help a lot; we'll all help the Institute put honey in every spot."

David Running offers a dozen of his choice untested Italian queens to the man or woman getting the largest subscription for any county in Michigan, outside of Huron county, and to the person sending in the largest subscription from any state he is offering 10 3-pound packages of Running's bees with choice untested Italian queens.

David Running says, "No beekeeper can afford NOT to support the Institute."

Calory Counters Should Watch Corn Sugar Sweetening

Heavyweight calory counters, among others, will need to be more than usually wary in selecting sweetened prepared foods since the Department of Agriculture's decision relative to corn sugar.

According to this decision, just announced by Secretary Arthur M. Hyde, pure, refined corn sugar may be used to sweeten prepared foods without so stating on the label. Corn sugar sold in package or bulk must be labeled as such.

However, dextrose, which is the sugar obtained from corn, is not as sweet as sucrose, the sugar obtained from sugar cane. Consequently more corn sugar will have to be used to achieve the same flavoring effect in foods. Increasing the sugar, whether in the form of dextrose or of sucrose, increases the calories. Herein lies the danger to the unsuspecting.

The general public may be affected, as well as the obese, by an increased

use of corn sugar, which is expected to result from the new ruling.

"The American dietary will probably be still further excessive in carbohydrates unless the people continue to learn to eat more intelligently," the American Medical Association pointed out with reference to the extra amount of sugar that must be used for flavoring when corn sugar is substituted for cane sugar. The American diet has been severely criticized because it contains too much sugar in proportion to other foods. Sugar is an energy food, but lacks vitamins and other important food elements.

Aside from the potential danger of increasing the carbohydrate consumption of the country, the ruling, as it affects sugar alone, will not have any harmful effect on the health of the country.

"It is generally admitted that the use of corn sugar in the place of cane sugar in packaged foods of all varieties does not raise, in any sense of the words, a public health problem," the American Medical Association stated.

The ruling does place an added responsibility on the Department of Agriculture to prevent any undermining of the food and drugs act, the Association commented. "The decision may make necessary, at least temporarily, a larger service for inspection and a more rigid control over labels and even over advertising.—Science Service.

The First Season With Gassed Combs

By Harold I. Perrin

In the article by R. B. Manley in the February number, "Formaldehyde Gas," page 68, he makes suggestions about the use of gas. Let me say that we treated about 300 combs this past spring and stored them till about the middle of the summer; then took them out, dipped each comb in water, shook out what we could, and placed them immediately in supers and on the bees at once.

We did not notice any bad effects from one of them. In fact we shook three colonies on the combs directly to make a test to see if disease would show up. Not a single diseased cell was visible when we examined them early in October.

Before we soaked them we had some experience with loss. I do not believe it is necessary to let them evaporate before using. I shall never bother to treat combs in which cells of American foulbrood are showing, but I shall treat all the super combs from such colonies and render the combs containing the dead material. In this way we do not fear foulbrood any more. Nebraska.

Replacing Winter Losses With Package Bees

By L. T. Floyd, Provincial Apiarist, Manitoba, Canada

THE month of April brings to us renewed activity regarding package bees. In western Canada, April is an important month. The beehives will be placed on their summer stands whether full of live bees or not.

One of the mistakes commonly made is to take it for granted that every hive containing live bees is all right. The wide-awake honey producer will decide at this time that a colony of bees covering less than four combs is about valueless and will order a package to take its place and another for every hive that died during the winter.

It costs a lot of money to equip an apiary and get it to the place where there are plenty of drawn combs for the crop. When this has been accomplished it is highly important to have sufficient bees to keep this equipment covered every season.

Beemoths do not bother us in western Canada, but we have the mice and the dust storms and the dry climate, all doing their part in the deterioration of our equipment of combs. The bees can take care of all these things if they have a chance.

Bees in package form are now so cheap that no one with a full equipment can afford to have it lay idle. We have learned a lot of things in late years regarding package bees. One point is that we do not buy our bees early enough.

Prof. A. V. Mitchener, of the Manitoba Agricultural College, has a list of people keeping records. At our last convention the figures submitted by him showed that the date of delivery on the packages purchased by these men has been changed in five years until in 1930 they were two weeks earlier than five years ago.

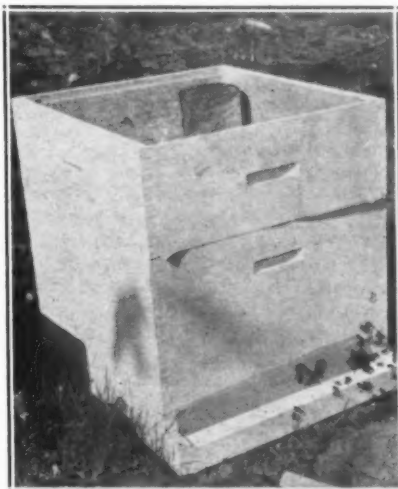
The death rate in package bee shipments also shows that bees arriving from April 14 to the end of the month have a lower death rate enroute than in the corresponding dates in May.

Crops secured from two-pound packages received in late April were so much larger than from packages received three weeks later that the difference paid for the packages.

Two-pound packages of bees arriving in Manitoba around April 15 to April 20 may run into cold weather and snow. And what then? If this happens what can be done? When I was a small boy my home was in eastern Canada, where I now know the houses are poorly built. The rooms where we slept were unheated and often very cold.

My mother, before she took us to bed in cold weather, would take two or three bricks and place them in the oven until they were well heated,

then wrap them in newspapers and put them in bed with us, and they would keep us warm for half the night. As I grew older I learned a better way of warming a bed, but still think there are times when the bricks can be used to advantage on the bees.



The package is in, the entrance reduced, and the feeder on, ready to close up and leave alone.

A brick warmed in this way and placed in an empty half-depth super above a package of bees that the operator is hiving will generate enough heat to keep the bees warm until they are all out of the crate, and once on the combs they can stand a lot of cold. The entrance to the hive, of course, should be entirely closed while this is going on and the super

and brick removed after the bees are out of the package.

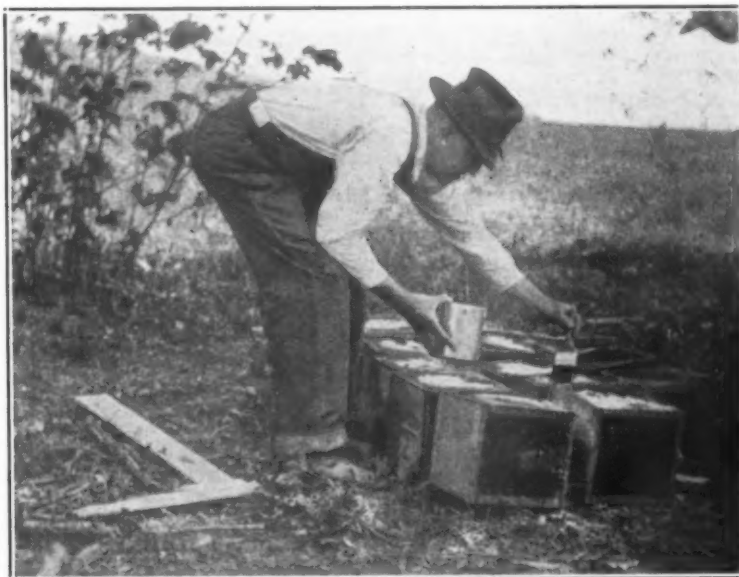
All successful gardeners in western Canada have a greenhouse, some of them very small affairs, but the necessity of getting a start of a few weeks in our short seasons is generally recognized. Those beekeepers who are most successful are working along the same lines.

We have learned from experience that a queen begins to lay at once when released on combs from a package of bees even though the weather is too cold for bees to fly for a week afterwards, so long as they are warm and have plenty to eat. They thus gain steadily on the wintered-over colonies needing a cleansing flight in order to get going.

Two-pound packages of bees hived in April and given a super as soon as it is needed, so the queen will have the run of twenty combs for the season, will seldom swarm. She can be confined to these twenty combs with a queen excluder and supers given above it as needed and the operator has as near a let-alone system of beekeeping as can be devised.

There-pound packages are more likely to swarm and some system of control must be used on them. They have not shown as large crops as the two-pound size.

I recently read what was to me a very amusing advertisement in one of our bee journals. It said "Five hundred pounds of bees flew away last year because it was too cold in the North to receive them." The writer of this ad may have meant this for a joke, but I would have liked to have had him with me one day a



Brushing sugar syrup on the wire of the cages, when the bees come, helps to keep them quiet while they are being hived. Give them all the syrup they will take.

few years back when I was hiving package bees when it was so cold that my hands were cold the moment I removed my gloves and there was snow all around. The date, April 2.

The bees were placed in double-walled hives and the entrances closed tightly and not opened for a week, as it was real winter, but when the warm days came, the queens were found released and with a fine patch of young brood.

Package bees can stand cold weather in transit much better than the heat, as the cold makes them

cluster and they travel better than when struggling continuously in an effort to escape from the cage.

The death rate in package bees during the past five years has decreased in a very wonderful way until now there is little chance of them arriving dead. The matter of the high death rate in queens is still a worry, and a few extra queens with each shipment is a wise provision.

My guess as to the future is that the shipper of package bees who can truthfully state that he raises his own queens will be the one who will get the most business.

Is There Any "Best" Race of Bees?

By Maurice N. Shutts

I THINK those articles by Mr. Latham and Mr. Hann, in regard to the best races of bees, were the most interesting I have read for some time. Perhaps the more so because I have always been interested in the races of bees.

Now, with all respect to both of these gentlemen, I would like to ask them how each can lay claim to the "best" race, and yet each breed a different race. Of course it is their opinion from their experiences. But that is the one question that has led me to sit down and think for myself.

It is true that, at one time I owned both races, but now I realize, I have never given either one a chance to do its best. With eight frame hives, stretched combs, etc. from old style foundation, what could I expect, whether the bees were yellow or gray.

Now there is no question in my mind but what both of these men have bred their bees to a state of perfection. But I am wondering just how much advantage Mr. Latham has over Mr. Hann.

In the first place, I believe Mr. Latham was a specialist in the breeding of Italians some time before Mr. Hann ever started beekeeping. So much for that, but, that isn't where the most advantage seems to be.

Now I can't say, without considerable searching just when each race was imported, but let us consider for a minute, just what the circumstances seem to be. It is certainly many years since the first Italians were tried. Considering their other qualities, are they not the most beautiful of the races?

Who was the beekeeper of that time, that was not thrilled by their beauty, and the honey they piled up. And it was only fair that they should be, in contrast to the black bees of that time. All who could, worked and saved, sometimes went miles and miles, to get some of these new yellow bees. Enthusiasm ran high.

Is it not possible that they really awakened a new interest in beekeep-

ing? Each beekeeper tried to breed from his best, to pass them along to others who continued to breed and sell to every part of the country. In that way they were tried under every method of management and climatic condition. They were kept in every size of hive, from a shallow 8-frame to a Modified Dadant. It would seem as though there wasn't a single factor against them. Anyway it seems safe to say, they went ahead with all the advantages to be had. With each bee man doing his best, according to his ability, so the law of nature guaranteed considerable improvement over the original stock.

Now what about the progress of the gray race? Suppose they were imported at the same time, what was their bid for popularity? True they are larger and more noble in their work and disposition than the blacks, but who would care for that alone, against the beauty of the Italians?

I don't want to place unreasonable emphasis on color, but I honestly believe it has played a very important part in the nation wide popularity of the Italian bees.

Again, what of the few importations of the gray bee? Where are the thousands of beekeepers to give them a chance? To try them under every condition, and management? To give them every encouragement possible, so their good qualities might be improved with good care?

Is not their gentleness to be admired? And their work, is that so far below standard, if there is a standard? I have seen a swarm fill a hive so full in three or four days that the queen had no place to lay. They started cells and swarmed next day, without a single days loafing.

This of course brings us to their one fault—swarming. Or is it their fault? When we consider them kept for generations in small boxes and skeps, where the more they swarmed the more prosperous they were considered, what else should we expect?

Inasmuch as they have lived in a much colder and mountainous climate than the Italians, who can say what might have been accomplished had they been treated as the Italians have been? Had they been treated even with our yellow bees, plus the expert breeding by such able men as our friend Mr. Latham and others, would the results be just the same as now? I think there is a long chance for doubt.

With the present state of perfection of our Italian bees, it is safe to say that probably nothing will ever seriously interfere with their popularity. Anyway the gray bee will never be in the majority.

But until I can see years of work on them, I shall believe about them as I have learned to believe about poultry. So many times I've been asked "What is the best breed of fowls for me to keep?" To which I am obliged to admit, "There ain't no such animal as the *best*." There are too many things to take into consideration. In the meantime I admire Mr. Hann's defense.

New York.

Boiling Frames and Using the Blow Torch

By J. H. Sturdevant

In the January number, page 31, C. D. Cheney states that salsoda in hot water, not boiling, for five minutes will sterilize frames. Why not give the heat a little more time? Now I have boiled hundreds of frames and I rather enjoy sitting down and reading the American Bee Journal for about thirty minutes after filling a boiler with frames, while the fire is hot and the boiling goes merrily on. After one has boiled a stack of frames, he can keep quite busy renailing those which have cooled, as practically all frames which have been put through hot water will require renailing. In fact, it isn't a bad idea to pull the frames apart first and put in three or four times as many frames to boil as you could otherwise. Then renail them just as though they were new frames.

The method of using the blow torch to sterilize equipment is all right if it is used long enough and strong enough, but it is a whole lot quicker and more thorough to stack up five, six or seven bodies and throw in a quart or so of gasoline, then get back about twenty feet and light a bunch of excelsior and toss it over into the hive bodies.

It is not a bad idea to tell the fire department what you are going to do, or they may be over and turn the hose on that stack and you. I had this happen once, and that was enough. Since then—well, I tell 'em. This method of burning with gas is sometimes very thorough. I have on one or two occasions let the

Doings in the Northwest

By N. N. Dodge

A Warm, Dry Winter

One of the warmest, driest winters on record in the Northwest is drawing to a close. Only in Utah and southern Idaho has there been much snow and cold weather. Reports from other districts indicate that there has been so little snowfall that irrigation water will be very scarce next summer. Alfalfa and sweet clover will suffer and low yields of honey in many districts may result. Along the seaboard of Washington and Oregon the winter has been mild, with no snow, although rainfall has been about normal. Pussywillows in this region were in bud in January, and bees were gathering pollen and nectar from this source on warm days in early February. One beekeeper reported sealed brood in a colony which he opened February 6. Colorado farmers report no frost in the soil in late January, but soil moisture too low to permit plowing.

— o —

Honey for Strenuous Training.

Northwest athletes are becoming noted as honey users. Helene Madison, 17-year-old swimmer, who broke twelve women's world swimming records in eight months of 1930, has honey on the table at every meal. Her trainer recommends honey as the most desirable sweet for persons in strenuous physical training.

— o —

"Little Marlo"—New Honey Cookie

"Little Marlo" is the name given to a new honey cookie boy (resembling a gingerbread man) baked and widely advertised by Mrs. Marlatt's Bakery in Seattle.

— o —

Hamann Shies Vamps

Mr. C. E. (Jack) Hamann, manager of the A. L. Boyden Company of Seattle, distributors of Boyden's honey and bee supplies in the Northwest, recently returned from a two weeks' trip to Los Angeles. He reported no unusual experiences except in Redding, California, where he was almost vamped. Mr. Hamann expressed the opinion that there must be a scarcity of young bachelors in Redding. The Seattle branch of the A. L. Boyden Company moved its quarters during January and is now located in a roomy, airy warehouse at 419 First Avenue South, Seattle.

— o —

Washington Appropriation Sought

Washington beekeepers have been alarmed by the failure of the state Legislature to make any appropriation

for carrying on bee inspection work during 1931-32. The \$4,000 heretofore appropriated for this purpose, to be administered through the office of the apicultural extension specialist at Washington State College, was not included in this year's budget. President M. F. Mommsen of the Washington State Beekeepers' Association has appointed a committee to interest legislators in the needs of beekeepers and attempt to influence the appropriations committees to reconsider and add the appropriation to the budget.

— o —

Standard Recommended for Honey Packages

Efforts are being made by the Washington State Beekeepers' Association to develop standard-sized honey packages and induce beekeepers and honey packers to discard the numerous odd-sized packages, a great number of which are now in use.

— o —

Kehn Finds Bees Sell Honey Bread

Mr. Max Kehn, manager of the Rainier Baking Company of Seattle, has been using live bees in display hives in his advertising work, in which he features Honey Bread. He reports excellent results, and plans to continue this form of advertising indefinitely.

— o —

American Can Reports Demand for Fives

According to the sales department of the American Can Company with offices in Portland and Seattle, there has been a very heavy demand for five-pound honey pails during January and February. Commercial packers as well as beekeepers have increased their packing activities, if the quantity of pails ordered is any reliable indication.

— o —

President Smith Finds Conditions Good

Ralph G. Smith, president of the Mountain States Honey Producers' Association, whose home is in Amenia, North Dakota, has made an extended trip throughout the Northwest during the winter. He has visited many of the members of the Association and has inspected several of the Association's warehouses and bottling plants. Traveling in his own automobile, he has been as far south as California and almost to the Canadian line in Washington. He reports the roads in excellent condition everywhere and winter driving con-

(Continued on page 179)

whole stack burn up, but after one or two experiences one can judge when to put out the fire, which may easily be done by throwing water into the bodies and slapping on the cover. Sometimes I give the stack a second firing if the first one was not sufficient. Sometimes I complete the job by using a blow torch along the rabbits, but ordinarily I get a complete job the first time.

Often I burn up the old hives entirely, the frames and all, as it is frequently the cheaper way and is perhaps always the best way. A new shirt is always better than an old one. Just so with hives and frames. I buy in all the available hives, bees and all, I can get, and also all of the old boxes, and have done this for years, renovating and eradicating foulbrood for myself. If everyone else would do the same, we would soon have no foulbrood.

I most always make the transferred colony pay its way the first year, if obtained early in the season. Many of my present producing colonies are from those which some discouraged farmer-beekeeper turned over to me when he found he had disease.

While I admit I do not agree with everyone as to the best means of eradication, I do believe in burning and I do a lot of it, but I prefer to do it myself and as I please, rather than to wait until forced by law and officers. Nebraska.

Red Clover Honey in 1930

I see someone asks the question through the Bee Journal (I think it was in September or October number—I have got it misplaced somehow in moving) if anyone had any linn or basswood honey. I have none, but would like to ask through your Journal if there is anyone who harvested a fair crop of red clover honey in 1930? I did. Got as much as two supers of chunk honey per hive on part of my bees. It is the first I ever had that I thought was all red clover honey, or practically so. I think it is hard to beat in flavor and quality.

James I. Estes, Missouri.

But They Want Curves Now

An item has been going the rounds of the press in the United States quoting an unnamed prominent London physician to the effect that "The golden rule for those seeking a slim figure should be: 'Eat whatever you like and as much as you like as long as it is properly digested.' Easily assimilated foods can be taken in any quantity without fear, and two of these foods are oysters and honey."

F. H. Madison.

A Great Southern Honey—White Tupelo-Gum Ogeechee Lime

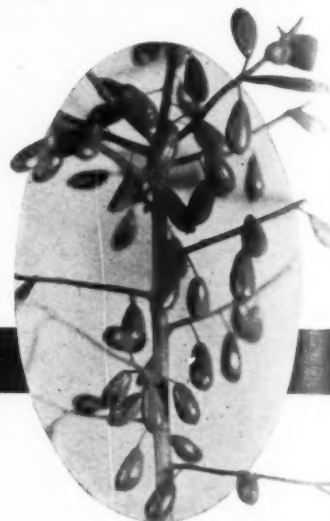
By J. J. Wilder



A branch of white tupelo gum; the male form, about half natural size, with matured foliage and full bloom.



The female form, half size, full bloom, mature foliage.



A branch of matured fruit, half natural size.

THE Ogeechee Lime is sometimes called Ogeechee Plum, Cotton-gum, Cork-gum, because of the lightness of the dry wood. The common name is White Tupelo-gum (*Nyssa Ogeechee*). It has a very interesting history because of its importance as the main fruit of the Georgia Colony and early settlers for over half a century. It was first grown on the Ogeechee River where we get its name—Ogeechee Lime—just southwest of the city of Savannah. The fruit was first used there by the farmers and their slaves around that city and along the river.

The history of the plant goes back almost to the beginning of the state of Georgia. A few brief paragraphs will quickly lead us up to the appearance of the first fruit ever grown on Georgia soil.

In the year 1733 James Edward Oglethorpe, the first white man to place foot in Georgia, came over from England with 150 unfortunate people. Sailing in at the mouth of the Savannah river, they anchored their vessels some distance up along the high river bluff where the city of Savannah now stands; went up into the forest overlooking the river and began at once to prepare a settlement.

A long row of crude log cabins was built, and the people housed. The next step was to lay out a large experimental farm, remove the timber and make it fit for cultivation. Then the decree went out from the settlers, "Bring seed, shrubbery, penetrate the forest, see what you can find that will grow and produce food on our new soil, for our ground is ready and we have no seed or plants. Furnish us with something to exist on."

Every out-going vessel was on the lookout, wherever they might be, for seeds and plants, so many things could be tried out. Soon a variety of plants were growing and more land was ready. Not much progress could be made, however, since the settlers were not trained to any kind of farm work.

The Georgia Colony Law prohibited Rum and Negro slaves so there was not much help to work in the support of the struggling colony. Back in England, Rev. George Whitfield, a noted reformer, had a definite call to aid the Georgia colony. He arrived in the early winter of 1738 and went at once to work. He saw the many needs of the colony and gave relief, returning to England to fully explain to the English Parliament the condition of the Georgia Colony and what was needed most. It needed slaves to perform the necessary labor in clearing the land and tilling the soil. The growth of the colony was hampered and would continue to be unless the Colony Law prohibiting slaves be modified to admit at least a few. He succeeded in getting the modification passed and slaves were admitted in 1743. During the years 1750 to 1760 the slave traffic in Georgia reached a high point. Hundreds of slaves were imported from Africa by the New England Slave Traders, and the Georgia colony started on the upward trend. During this time it was that the seed of this great plant reached our soil through the hands of the slaves, was

planted, cultivated, and soon bore fruit, which was found to be delicious and used extensively by the Georgia colony and the first rural settlers.

To induce the negroes in their native country to come over to the new world, the heads of the negro tribes and families were promised sixty acres of land and a horse to cultivate it for each member of the tribe or family if they would only come over. They were urged at the same time to gather up all kinds of seed which they might bring along with them to plant in the new land. This was great encouragement and large quantities of seed were brought by the negroes. It was hard for the poor fellows, for they were put on the block and sold for whatever they would bring, resulting in great discouragement among the newly arrived slaves.

On account of this deception they took their collections of seeds and cast them into the Ogeechee River, ponds, and nearby creeks. This was just the kind of soil the Ogeechee Lime needed; very low, wet and mucky. In this rich, river-made soil seed came up, grew and flourished and bore fruit out there in the wilderness where it was least expected to grow.

In the course of time some of the slaves were more congenial, they liked their masters, turned their seed over to them and they planted it out in the field. When fruit came, those plants that bore fruit worth while were reserved and given more attention. This was the case with the Ogeechee Lime, and it was extensively grown and the fruit lavishly consumed. It was not only eaten from the trees but was cooked into jams, jellies, preserves, pies and prepared in various other ways. It was also

used extensively in making beverages. The people had found a great plant that would grow either in the wild woods or in the cultivated field.

Later when people came in from North Carolina and Virginia to settle out in the interior on high bluffs along navigable streams, they went over to Savannah to obtain a supply of this valuable fruit. So for some years the Ogeechee Lime was growing well, along all the large and small streams near their mouths, along the Atlantic Ocean and the Gulf of Mexico.

These were great days in the propagation of this plant, for every home by necessity was the home of the Ogeechee Lime—the only fruit obtainable. It was greatly enjoyed when at its height and the fruit was everywhere consumed.

It was not a native of this country. The trees do not mature perfectly; very imperfect, in fact, for the main trunk is badly affected with rot. The wood is rough, bumpy, snarly and the limbs sprangle off in a very peculiar way from the main body. They never grow over 50 or 60 feet high. The imperfect trunks are not very large, as the tree at its best is only a dwarf.

At the base are a large number of roots penetrating deep down into the muck and mire, literally sucking up the stagnant water on which it seems to thrive. It will not grow on high elevated ground to any extent.

The very best specimens of trees will not live over 50 or 60 years because of infection which gets into the wood, so the first trees that must have grown in a small pond just west of Savannah, and along the marsh land of the Ogeechee River, have long since found their way back to Mother Earth, and many more generations have come up in their place.

The bark on the main trunk is usually dark and rough, but further up about the limbs and twigs the bark is smooth, soft and tender, white in appearance. The foliage is oblong and smooth around the edge, never very dense, only thinly shading the ground under the trees. When it reaches maturity and takes on a heavy load of fruit, the tree is naturally beautiful and wonderful to behold. We find nothing else like it out in the forest so attractive on account of its beauty. The tree would adorn the premises of any home and be a wonder to everyone who looks upon it.

The fruit is distinctly naval. The skin is perfectly smooth and green until ripening time when it takes on a color like that of a beautiful red apple, and the texture of the peel is about the same. It does not have to be pared before using. The meat contains an equal amount of fiber and pulp. The fruit is not solid when thoroughly ripe but rather soft and

has a very acid flavor, much like that of the lime, but milder, a distinct flavor. The seeds are small and like an almond kernel in shape. The average size of the fruit is about that of a large prune when well soaked, just a little more oval, which makes it somewhat longer.

The Ogeechee Lime is still used to some extent by the negro, and by the white people in the cities, near which it happens to be growing. Negro head peddlers are frequently seen with large quantities of this fruit, going up and down the streets in the resident sections, calling "Ogeechee! Ogeechee! Ogeechee!" You may have heard them many times and wondered what they said.

While the Ogeechee Lime has almost passed out of use giving way to the more delicious fruits, it has a great value which no other fruit has. It is a wonderful honey plant, secreting a large amount of nectar through the small round shaped bloom balls that are in process of opening from three to four weeks. The honey is light in color, a very bright lemon hue, which makes it a fine appearing article. It has a thick body and a pungent rich pronounced flavor. The honey will not granulate, even in the most rigid climate. This particular quality, together with the fine flavor makes it the most famous honey in all America. It is known as the White-Tupelo-Gum. All honey lovers know about it and give it choice among other honey.

It is sufficient to say that at this late hour in the history of this wonderful plant, it is serving its greatest purpose, a blessing to the human family everywhere. Beekeepers on the Tupelo ranges are found all along

the lower Coastal Plain Section from Mississippi to North Carolina. The industry is growing rapidly and will continue for a long time to come, for less than two per cent of the White Tupelo-gum range is now occupied. Not even the best authority on beekeeping in the Tupelo-gum belt can even give a guess as to what this plant will be in the future.

It has made commercial beekeeping possible in the regions where it grows and hundreds of carloads of the finest honey leave the states of Georgia, Florida and South Carolina each year for northern markets, in addition to the honey consumed in the producing territory and in the nearby honey markets.

So the illiterate dark-skinned slave that was brought into this country from his native state through deceiving promises, carrying his pack of seed made of animal skin, died without even dreaming of the blessing he had brought to America.

Authorities consulted—Dr. George N. MacDonald, Miami Beach, Florida, who made an extensive study of swamp vegetation in the southeastern section some years ago in search of the Lob-Lolly Bay now almost extinct.

"Lee's School History of the United States."

"Memories of the Rev. George Whitfield."

Roman Meal Bread With Honey

Fluhrer's Bakery, of Medford, Oregon, is using newspaper advertising to help local grocers sell Roman Meal Bread made with honey. It is also helping local beekeepers by heralding the fact that "It's good because it's made with honey from local apiaries." F. H. Madison.



A peep into a forest of Ogeechee lime, vigorous growing, young trees with perfect trunks. It is very much a water plant, overflows being essential to its best growth and for the best honey yields. The matured trees decay badly.

Does Cage Confinement Injure Queens?

By Allen Latham

THE answer to the question asked in the title is "no." Confinement in a cage does not injure a queen *per se*, but that queens while in cages are irreparably injured very often must go undisputed. What, then, is the reason so many queens shipped through the mails never prove of any value?

There may be many reasons for queen failure—semi-starvation during the trip from breeder to purchaser; chilling during that period; too much dry atmosphere; too high a temperature; improper handling prior to the trip or subsequent to arrival at destination; and last, but not least, imperfect acceptance by the bees to which the queen is introduced.

This article will not discuss all these phases of queen failure, for, as the title shows, the chief discussion will be upon confinement in the cage. That many breeders handle their queens improperly before mailing, that many of them prepare the cages for the mail improperly, that too much air is allowed access to the cages, that various mishaps may befall the cages en route, that the buyer is entirely ignorant as to how he should care for the queen upon her arrival—all these phases of the subject must pass unchallenged; that every one of them can be easily corrected must also pass unchallenged.

Many big honey producers rear their own queens, not because they wish to, but because they feel that they must. They believe that queens cannot be sent to them by mail and prove uniformly good. Yet it is true that queens can be easily sent by mail and prove just as good as when they started. No, mail will not improve them; they must be good at the start! Only one of the difficulties is hard to overcome; that one is the treatment by the mail or postoffice department. If a sack of mail containing queens is put adjacent to a row of steam pipes those queens are quite likely to be ruined.

Up to two years ago I rarely mailed out a queen which had been caged over twenty-four hours. I find that a vast number of my patrons prefer that, and not a few ask me to send them queens freshly caged. The price cutting has forced all queen breeders to cut costs wherever they can. Few beekeepers will pay a higher price even though they thereby may get a better product. We queen breeders must sell quantities of queens in order to make the business pay. If we keep our prices up, then down go the orders. We are forced to reduce expenses. Individually, I have sought all possible cost cutting. Knowing that the sending

out of queens freshly caged was a costly item, I began to experiment. My experiments proved to my satisfaction that queens are not necessarily injured by long confinement in a cage.

I had had evidences of this before. Queens from Cyprus and Italy had lived long and useful lives. Queens missent in the mails and returned to me after much delay had lived long and useful lives. Why had these queens not been ruined? I could see but three probable factors that had to do with this result: the food in the cage, the attendants, and the climatic conditions. The last of the three includes the amount of air furnished, temperature of that air, moisture content of that air, and presence or absence of light.

Believing I was on the right road, I began to cage all queens as soon as they were mated or laying and to place the cages in a situation as ideal as possible. The caged queens and attendants were put into a dark room of uniform temperature where there were no drafts. Orders for queens were filled with the oldest caged—that is, those that had been in confinement longest.

The last statement must be modified. If queens were to go on a long trip, freshly caged ones were sent. If the oldest had been caged a full week, they were not sent anywhere. New cages with new attendants were prepared and queens that had been caged a week or ten days were transferred to the new cages. This system was followed in 1929 and 1930. During those two years I had to replace not to exceed about thirty queens, and I am confident that heat in the mail sack was responsible for most of this replacement.

When fall came, in 1929, I had about three hundred queens in cages and few orders came in. I kept these queens in many cases in the cages for six and eight weeks, renewing the attendants and giving fresh cages as needed. I requeened, in October and even as late as November 2, several of my own apiaries with these queens. One apiary in particular was requeened on November 2 with queens that had been caged late in September, probably about September 16. The attendants and cages had been renewed twice. Three queens were probably not accepted, as in the spring of 1930 three colonies were queenless. All the other late introduced queens were doing finely. That apiary was one of my best in 1930. All summer long those queens, with one or two exceptions, kept their colonies powerful all the season, and when fall came I left them to see what they would do in 1931. Many

of those colonies today have 30,000 bees in them.

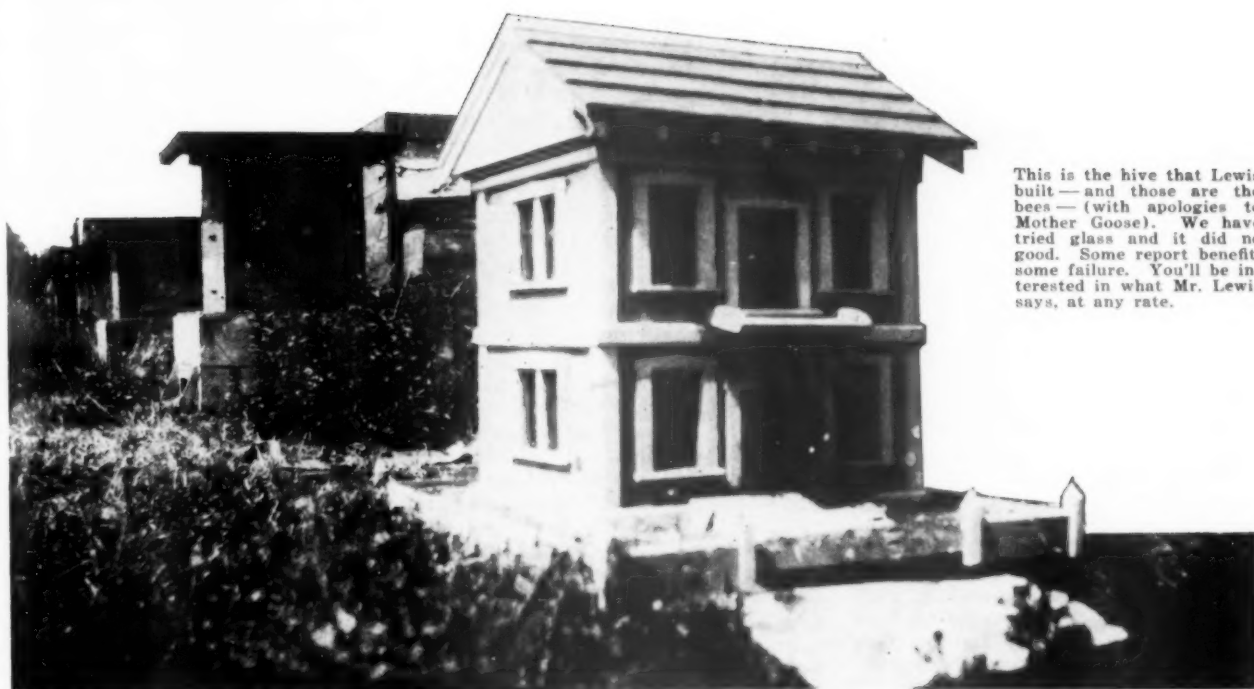
In the other apiaries where the long-caged queens were introduced the results were the same. I have left upwards of twenty-five queens for 1931 which were introduced in the late fall of 1929 after confinements ranging from five to eight weeks before they were introduced. I practice annual requeening, but desired to test out the lasting qualities of these queens.

It would seem as if ample proof was here that queens are not of necessity injured by cage confinement. These queens for the most part were placed in the cages when very heavy with eggs. There is a very prevalent belief that a queen heavy with eggs is badly injured if taken from the care of a full colony and given over to the care of a few attendants. I am convinced that there is no logical reason for this belief. I have caged many thousands of queens in just that condition, and I have had any number of testimonials respecting the prolificacy and long life of such queens. Let us consider the matter a moment.

When such a queen is caged she is being fed constantly by a rather large number of nurse bees. Her organs are in a constant state of stimulation. She is in consequence developing several hundred eggs. These several hundred eggs are in various states of development. At once her food supply is cut down nearly 100 per cent, so far as stimulation goes. She is given ample energy-producing food, but very little egg-producing food. What happens? Surely, many will say, a queen thus treated will suffer; she will suffer as does a cow in the height of milk production if said cow is left for two days without being milked. This is not true. Cows and queens are not all alike. It would be more to the point to say that such a queen will suffer as a hen will suffer if, when developing many eggs, she is suddenly cut off from food. Such a hen will lay a few eggs of reduced size and will grow very thin, as she will call upon her own body to supply the eggs. Later, when given plenty of food she will come back to normal, probably none the worse for the experience. So the queen will lay her eggs, many of them, much smaller than normal, and will doubtless drain her body of all egg-producing reserve. Like the hen, the queen will grow thin, but will suffer no permanent shock to her system.

There seems to be a rather astonishing ignorance about a queen and her egg-laying. Some even think that

(Continued on page 176)



This is the hive that Lewis built — and those are the bees — (with apologies to Mother Goose). We have tried glass and it did no good. Some report benefit, some failure. You'll be interested in what Mr. Lewis says, at any rate.

Light, or Sunshine (or Both) in the Hive

By W. H. Lewis

THE claims of these Russian scientists as to the advantage of light or sunshine in the hive was so directly opposite to the opinion of the writer, formed more than twenty-five years ago, with two- and three-frame glass hives, that it was concluded to make another hive on a more extended scale. Two ten-frame hive bodies were used and care was taken to do good work; if the hive was a success, it would then be used for exhibition purposes.

The openings were cut as shown in the photo. The doors are $3\frac{1}{2} \times 5\frac{1}{2}$ inches, the windows 3×5 inches on the side of the hive. The end windows were double size. The glass was two thicknesses, with about one-fourth inch between each glass, and were put in with a white lead joint and closely framed so as to be as tight as possible. The doors were maple and were hinged and spring catches on each. At the bottom of the doors an opening was cut for an entrance. These entrances could be closed by a little strip cut the same as a doorstep in any house. Behind the doors screen wire was put so as to come down close to the doorstep. This was done for exhibition purposes. If the entrance was closed, the doors could be opened for ventilation and bees could not get out.

Both sides and ends were exactly the same and a bee-tight partition was put down the middle of the two hive bodies, with five frames on each side, so bees could be put on each side and both sides have the same

openings. Foundation was used on all frames. The hive was in a yard of about forty colonies and was put about twenty feet from a two-story building on the north and faced, one side, a little northwest; thus one side and one end would at all times be in the shade; the other, or south side, and east end would be exposed to the sun the greater part of the day. Three standard ten-frame hives with five frames of foundation each were put out as check hives.

On the fifteenth of May two two-pound packages were put in the glass hive and one package was put in each check hive. All were good packages and appeared to have good queens; all on five frames of foundation each. Five-pound cans of syrup, about 50-50, were put on at once and filled as soon as they were empty. Feeding was kept up for about six weeks, or until near end of June. During this time there was hardly a drop of nectar coming into any hive in the yard, so the packages got nothing but sugar syrup.

It was quickly noticed that bees would not touch the foundation exposed to the light of the windows. In about two weeks' time the outside frames on each side were transposed with the frames next to the central partition, which were now drawn out and fairly well filled with syrup. In three or four days every drop of syrup in these combs had been removed.

The check hives showed considerably more brood at this time and

would soon need more room, so the fourth week, as young bees were then flying, the extra hive body was put on the glass hive, which gave five more frames to each package, and five frames foundation given to each of the check hives. The outside frames on each side of the glass hive were again replaced with frames full of syrup, but this syrup was again quickly removed where it was exposed to the light. Feeders were kept on for a time longer.

The first week in July, I noticed young bees flying in front of the glass hive, both sides, as if they were intending to swarm. Next day they both came out and settled on a fence post in the middle of a heavy growth of blackberry. Here was a puzzle to me for a few minutes. How could I separate this lot of bees and get the queens back where they belonged? I opened the glass hive on one side to note the conditions. The second frame I took out had two open cells from which the queens had lately emerged, and three other cells near emerging. Two of the cells were cut out, leaving one, and a close watch kept for virgins, but none were found. The other side of the hive showed almost the same conditions and was treated the same way.

As I was closing the hive, I noticed a dead queen on the ground on the north, a shady side of the hive. It was the laying queen. A further search and I found a dead virgin. The other, or south side, I found two dead virgins. This was a condition

new to me. The weather had been fine for some time; the queens in the colonies were both young and had not been laying two months; the queens in the check colonies did not swarm during the season. And why should the bees kill these queens? I laid it to the colony being dissatisfied, undoubtedly, from the light. I then went to the swarm with a couple of queen cages in my pocket. It was a big bunch of bees and perfectly quiet. Got a pruning shears and cut out the blackberry enough to get at them. With a small stick I commenced to separate them. Soon I found a virgin queen, which I killed, then waited a few minutes. As the bees were still quiet, I went at them again and soon found the laying queen. Tried to cage her, but she got away from me in the tangle of brush and thorns. Soon I saw her again for an instant and killed her. Again waiting a few minutes, the bees commenced to fly and go back to the hive and soon were all back where they came from. There were no more queens in the swarm.

I thought I had done a good job, but the next day they all came out again and settled in a plum tree. I cut the limb and gently put the swarm on the ground about ten feet from the hive and looked for the queens, but in a few minutes they started to fly and went back to the hive. There was no queen with them. This was another puzzle.

They stayed in the hive after this, and in time, when I thought the queens should have emerged and mated, I looked into the hive. The north, a shady side, had a fine queen just started to lay. The south, a sunny side, was queenless. The partition in the middle was then pulled out and the bees allowed to unite and were left as one colony on twenty frames for the balance of the season.

The check hives were now full of bees and some honey coming in, so a super was put on each hive. Soon after this the openings or windows in the glass hive were closed tight for a week and then opened. Considerable honey had been put in and the combs were covered with bees. But in three or four days the honey was all removed and the combs deserted. Tried it again with the same results.

At the end of the season the glass hive had about twenty pounds of honey and were fed thirty pounds of syrup for winter. The three check hives gave about forty pounds each surplus and had plenty of stores left for winter.

At first I was a little afraid the direct rays of the sun on a warm day would melt the combs or foundation immediately behind the glass. At first I put up a screen, but it was

not necessary. The double glass, with a dead air space between, evidently the sun's rays did not penetrate.

It was repeatedly noticed on cloudy, dull and cool days, when there was not a drop of nectar to be had, that many more bees would fly from the glass hive than from other colonies; particularly was this so in the fall, until all openings were closed and hive packed for winter. This late flying must surely be a considerable loss to the colony.

I have watched this glass hive pretty carefully and there is no other conclusion but that bees strongly object to any light or sunshine in the hive and will do much better without it. After the central partition was removed, the bees used almost exclusively the north, or shade, entrance, very few bees flying from the south, or sunny side.

This summer a number of beekeepers in B. C. used hives with glass ends, and none of them, as far as I know, have given a favorable report.

Talk About Hawkeye Spirit!



This 4-H Club beekeeper is Lawrence Pease, of Shenandoah. His exhibit at the Mid-West Horticultural Exposition won second prize, which amounted to \$10.00. During the Iowa Beekeepers' Association annual convention, when the drive for subscriptions to American Honey Institute was on, Lawrence jumped up and said, "It's worth five dollars to me—I'll give half my prize money." How's that?

Does Cage Confinement Injure Queens?

(Continued from page 174)

a queen ceases her egg-laying if taken from the combs and that she must absorb all those unladen eggs. Surely if she could do this she should have ample food for weeks. What she does is to continue to lay the eggs, dropping them in the cage. They are not often seen, for they are not conspicuous, and usually are soon eaten by the attendant bees. Therefore, indirectly, the queen will benefit, for the attendants will, from the eggs, produce food for the queen.

I think more attention should be paid to methods of queen-rearing, preparation of candy for cages, selection of attendant bees, selection of place to keep the caged queens (I have seen such caged queens lying on a desk top by a window through which the sun shone and through which drafts of air could blow over the cages, this in an establishment where queen breeding and selling have been going on for over half a century). Buyers of queens should learn how to care for them upon arrival. If all the factors which injure or preserve queens during transit are carefully attended to, we shall see at once a vast improvement in the quality of queens which arrive by mail in small cages.

I have proved absolutely to my own satisfaction that so far as staying in a cage is concerned a queen is not injured in any way that I can detect. We must therefore look elsewhere for the explanation of poor queens by mail.

February Number Best in Ten Years (Please Pardon Us)

I have been reading the American Bee Journal for over ten years and I think your February number is the banner one, starting with young Duane from North Dakota and Morgan from South Dakota. I have been inspecting here for some time and did not know we had a man like Morgan with us till I picked up the American Bee Journal.

Then there is the bear. I hope every beekeeper reads the American Bee Journal from cover to cover. Turn back to the first page of the February number, page 53, and read it and study it.

Then there is the corn sugar ruling, drought, unemployment, biscuits, glass packages, 5,000,000 pounds of honey in Utah, sweet potato syrup, so many good things on pages 68 and 69.

Even the best bees are mentioned. Show me a magazine with a wider variety of worthwhile subjects and I'll subscribe for it.

A. G. Pastian, Webster, N. D.



Complexes, Easter Bonnets and Honey

By Betty Bee

OF course he is right, this poet who so charmingly sings about young men's fancy turning in spring to "thoughts of love." Who ever questions the words of a poet? But just why, I wonder, does he limit his remarks to young men? Is this spring-time tendency an exclusive characteristic of the stronger sex?

Certainly not! I have known women quite intimately for a good many years and I have yet to know one unaffected by this spring-time fancy; but we do not show it by mooning around. Indeed **we do not!** With us it takes a different and more practical turn and appears in a form quite unsuspected by even poets—a form so unusual that there has been produced in us a sort of suppressed complex at this period of the year.

To illustrate: Have you ever known a girl or woman whose thoughts do not instinctively turn to clothes when the early March winds begin to blow and the first tiny buds of spring peep forth? The joyous sunshine and delicate whisperings of growing things that proclaim the approach of glad Easter invariably stir her to thoughts of new hats and gloves, slippers and gowns. Until recent years, we women folk have been taught to coyly hide our love until such time as we were asked to express it to the chosen one, so spring clothes became our subterfuge; and some day a bold, high-browed professor, with a whole category of statistics, will come forth and announce to the world that we women have known for ages that this feminine weakness for new clothes at this period of the year is but the female racial expression of these "thoughts of love."

Certainly! From the days when Eve primed before her reflection in the placid pools of Eden, down to the present, we women have done our utmost to charm and attract our men, and Easter clothes is our sweet way of expressing, in a maidenly, coy manner, our desire to reciprocate affection. We never quite outgrow it,

either. I once knew a delightful old lady who missed the celebration of her hundredth year by only a few months, and as long as she lived she never failed to plan and prepare her spring outfit. What a making-over of best black silks and turning of second-best alpacas, and remodeling of third-best bonnets! No sweet sixteen ever spent more time and contemplation in the purchase of a spring hat than did this dear old lady in the annual selection of her indispensable "best" bonnet. She had had her "grave clothes," as she called them, ready and laid away for twenty years, and even these were each spring taken out, aired, laundered, retouched or remodeled!

But the day of remodeling and rejuvenation and turning is past! No dress is generous or elaborate enough nowadays to justify these home-like attentions, so, as we look at the charmingly natural waist lines and the longer, more delicately flowing, irregular skirts, it appears that this season if we are to be at all up-to-date, we shall indeed have to draw on our bank accounts rather than our ingenuity, for reconstructed hats and gowns are no longer good form, and a "reconditioned" outfit this Easter is quite out of the question.

So our dear Johns will have to rise to the emergency and pay the bills, for, really, aren't we doing it for their sakes? Aren't our lovely new clothes merely demonstrations of our "thoughts of love" toward the dear fellows, expressed in our own sweet, guileless, innocent way? And incidentally to help matters along, we can feed them liberally and well with honey-sweetened foods, and thus our methods of expression in regard to these early "spring fancies" will prove doubly effective. Here are a few suggestions for the pre-Easter period:

Creamed Shrimp. Melt one tablespoon butter and stir into it one tablespoon of flour. Blend well, then add gradually one cup milk. Stir con-

stantly and cook until thick and smooth. Add one-half teaspoon salt, a dash of pepper and a few drops of onion juice. (One-eighth teaspoon celery-salt may also be added if desired.) Add one can of shrimp and one tablespoon of light honey. Serve hot on buttered toast.

Baked Halibut. Wash, dry, and cut into suitable portions. Sprinkle with salt and pepper. Beat two eggs well, add two tablespoons water and one tablespoon light honey. Dip each piece of fish in the egg and honey mixture, then in cracker crumbs, place in well greased bake pan, add one generous teaspoon of butter to each piece of fish and bake in medium oven until done and nicely browned (about forty minutes). Serve with a garnish of sliced lemons or lemon juice slightly sweetened with honey.

Spinach with Honey. In the early spring, no vegetable is more desirable than spinach. Wash it thoroughly, shake slightly and place in good-sized kettle with the adhering water. Cover tightly and cook ten minutes, stirring occasionally to prevent sticking. Remove from kettle and drain, saving liquid. Chop slightly and serve with the following sauce: Melt two tablespoons butter, add to it the juice of one lemon, one-fourth teaspoon salt, one tablespoon honey and two tablespoons of the remaining liquid from the spinach. Blend well and serve separately. Garnish spinach with alternate slices of hard-boiled egg and lemon, or decorate with pieces of red pimento and sliced lemon. Serve hot. Any remaining liquid from the cooked spinach may be added to vegetable soup, since the mineral salts it contains are invaluable to the body.

Princess Honey Salad. To one pint of boiling water add one package of strawberry gelatine. Turn into moistened dish and set aside to cool. Peel, separate and cut into small pieces two oranges, one grapefruit, and a dozen or more red cherries, draining off and saving all juice. Drain off juice from one can of shredded pineapple. Add pineapple to other fruit and blend the juices. Cut in quarters one dozen marshmallows and place them with one-fourth cup of light honey in the combined fruit juice. When gelatine begins to show signs of hardening, beat with a Dover egg beater until very light and fluffy. Drain off as much juice as possible from the marshmallows and add them to the blended fruit. Place fruit and marshmallows in flat mould, pour over them the gelatine, stir slightly, and set aside to cool and get firm. When ready to serve, place individual helpings on lettuce leaves and decorate with whipped cream, honey-sweetened, with a pink rosette made of granulated honey tinted with rose coloring as center. This makes a

IF YOU WANT BEES WE HAVE THEM

This is a small ad, but there are lots of bees behind it, and as good as the best; from beekeepers of 22 years' experience and the best outfit in the State of Georgia. 1800 colonies and 9 years' shipping record with no complaints reaching our publishers and very few reaching us.

We fill our promises. No delay. Full weight. Italian bees. No drones. Any kind of package. Via express only.

J. G. PUETT & SON
Hahira, Georgia



The Evangeline Apiaries

of Morgan City, Louisiana

Are offering bees and queens as good as money can buy. Give us a trial and be convinced.

3-Pound package with queen.....\$3.25
2-Pound package with queen.....2.75
Queens, April to August......75

A Bee Paradise

Minnesota, North Dakota, and Montana, Idaho, Washington and Oregon are developing rapidly in beekeeping and honey production. Thousands of acres of sweet clover and other valuable honey plants promote high yield and fine quality. Much good territory remains to be occupied.

Beekeeping may be developed profitably as a sideline with diversified farming and livestock or as a specialized project. Conditions are equally favorable for bees and livestock. The most valuable feed and forage crops are easily grown and production cost is low.

Beef cattle, dairying, sheep, lambs and wool are all produced on a low cost basis on low priced land. Among the most favorable localities for bees and livestock are the Red River Valley, Milk River Valley, Lower Yellowstone Valley, and Valier Project.

Write for free book on either state and detailed information about bee raising and farming opportunities. Low Homeseekers' Round Trip Excursion Rates.

E. C. Leedy, Dept. J.

GREAT NORTHERN RAILWAY
ST. PAUL, MINNESOTA

Package Bees and Queens

For April, May and June Deliveries

Bright, non-swarming and best honey producers. Pure Italians. All necessary papers with package bees to Canada. No disease. Begin shipping April 1.

Two-pound package and untested queen, one to ten, \$2.65 each; ten or more, \$2.50 each. Three-pound package with queen, one to ten, \$3.25 each; ten or more, \$3.00 each.

Queens—One, \$1.00; six, \$5.00; twelve, \$9.50; fifty, \$35.00; one hundred, \$65.00.

Health certificate. Safe arrival and satisfaction guaranteed.

Taylor Apiaries, Luverne, Ala.

ITALIAN QUEENS AND PACKAGES

Bred by selection 17 years by one who knows how. They are prolific, hardy, gentle, and honey getters. Write for free booklet and prices.

HAILEY'S APIARIES
Hughes Springs, Texas



SUPPLIES

Dadant's Modified Hives, Frames, Wired Foundation, Extractors, Pails, Jars, Labels

Dadant & Sons Hamilton, Ill.

SMITH'S SUPERIOR BEES AND QUEENS Will Be Ready for Shipment About April 10

Our prices are LOWER than ever before; our QUALITY bees and queens are as good as you can buy at any price. Write at once for prices and information about our SUPERIOR strain of pure three-banded Italians. A postcard or letter will bring you a SURPRISE, so WRITE us at once. We book your orders without a deposit and hold any date you wish bees shipped.

Selected untested queens 75c each, \$8.00 a dozen.

N. B. SMITH & COMPANY, Calhoun, Alabama

Mention the American Bee Journal When Writing Advertisers

very beautiful and decidedly delicious salad or dessert. The remaining fruit juices may be saved until the next luncheon and served as

Poor John's Treat. Moisten left-over cake crumbs with fruit juice, add one well beaten egg, one tablespoon butter, a dash of cinnamon, a few raisins, and one tablespoon of honey. Place in individual custard cups, bake ten to fifteen minutes, then top each with a marshmallow, replace in oven until browned, and serve with cream slightly sweetened with honey. An excellent way to use up left-overs or for a quick dessert.

Honey Pecan Muffins. 1 cup Graham or whole wheat flour, 1 cup of white flour, ½ teaspoon salt, 4 teaspoons baking powder ¼ cup pecan meats, ¼ cup honey, 1 cup sweet milk, 1 well beaten egg, 4 tablespoons melted butter.

Mix dry ingredients well, then add to the carefully blended liquids. Beat well, add the pecan meats, saving one or more to be placed on top of muffins. Place mixture in well buttered gem tins, add extra nuts, bake in medium oven and serve piping hot with butter and honey. Makes about eighteen gems.

What Do These Imports Mean?

According to the figures given out by the Federal-State Marketing Service, the importation of honey and wax into the United States amounts to more than half a million pounds for each of these commodities during the months of September and October, 1930. The importation of wax was from nine different countries in widely separated sections of the world, and amounted to 606,130 pounds; and the importations of honey were from Hawaii and Porto Rico, amounting to 652,257 pounds.

These facts create strange sensations in the breasts of California beekeepers. Those who have sold their crops of honey and wax must write the result of the year's work in red ink; those who have their honey and wax stored, waiting for a market, are wondering if there is any such a thing as a market for honey and wax. The same reports of the Marketing Service that tell of these enormous importations of honey and wax tell of the slow movement and falling prices in the market for domestic honey and wax. A whole host of questions arise in the minds of those who are brought face to face with conditions of this kind. But what of the answer?

According to the general law of averages, it is about time for something good to happen to the beekeepers of this country, but things have a way of turning up just about as fast as they are turned up, and no faster. Organized effort—whole-

hearted cooperation — will produce results. Division means defeat.

One of the questions in regard to the importation of more than half a million pounds of Hawaiian honey into this country has to do with the blending of the imported honey with California honey and selling the blend to the public as California honey. Whatever one may say in regard to the legal and moral right of the importer to bring in a foreign product in direct and ruinous competition with the domestic article, there can certainly be no justification, either legal or moral, in blending the import with the domestic article and selling the blend on the reputation of the domestic product. California honey has a world-wide reputation for excellence and sells at a premium in many markets on that reputation. If foreign honey is being blended with California honey and sold to the trade as California honey, the perpetrators of that kind of fraud should be exposed.

R. B. McCain.

Doings in the Northwest

(Continued from page 171)

ditions but very little more arduous than those of summer. His wife has accompanied him in his travels.

— o —

Fresh Products Company Adds Honey to Line

The Fresh Products Company, distributors of package peanuts under the "3 Lil' Niggers" brand in northern Idaho, have expanded their operations and entered the Puget Sound trade area. They have recently added honey to their line and will push its sale through the independent grocery stores of the Northwest.

— o —

Monroe Kiwanis Club Has Honey Week

Mr. Arnold Z. Smith, county agent of Snohomish County, Washington, is cooperating with the Kiwanis Club of Monroe, Washington, in an effort to spread information regarding agricultural products. Each week is declared by the Kiwanis Club as devoted to a certain agricultural product. Stores in Monroe feature that product during the week, the local newspaper carries a story on the product, and a man intimately connected with the industry represented by that product addresses the club at its weekly luncheon on Wednesday noon. The week of December 8-14 was set aside by the Kiwanis Club as "Honey Week" in Monroe, a representative of the Pacific Slope Honey Company of Seattle talking to the club for half an hour about the health and food values of honey and the many varied uses to which it might be put by every housewife.

Clear A Crystal
HONEY JARS
will sell your honey

No panels to catch shadows which darken the color. Beautiful in Clarity and Pattern, and Strength in Construction.

4 SIZES — Individual, Half Pound, One Pound and Two Pound. Accurate Graduation.
WRITE FOR SAMPLES AND PRICES
HAZEL ATLAS GLASS CO.
WHEELING, W. VA.
WORLD'S LARGEST MANUFACTURERS
GLASS FOOD CONTAINERS

PACKAGE BEES

I shipped one customer in New York 994 three-pound packages of bees the past season, and of these only 41 packages arrived in bad condition. I had already shipped the same customer 500 packages in 1929. I am in position to give you the same satisfactory service. There has never been any foulbrood in this section of Georgia. I use liquid feed only. Price per package, any quantity:

2-lb. package with queen—1, \$2.75; 5, \$2.50; 25, \$2.40; 100, \$2.25
3-lb. package with queen—1, \$3.50; 5, \$3.25; 25, \$3.15; 100, \$3.00
Nuclei—2-fr. with queen, \$2.75; 3-fr. with queen, \$3.50—any quantity

Local representative for R. G. Dun & Co. past twenty-five years

N. L. STAPLETON . . . Colquitt, Georgia

GET RUNNING'S BEES And Get Honey? — They Satisfy!

PACKAGES and NUCLEI
The kind WE use in our extensive Michigan Apiaries, where WE produce honey by the car load.

ALL ITALIAN STOCK
Service guaranteed. Stock bred for honey getting and gentleness.

PRICES RIGHT. Following prices apply to all booked orders. With choice young queens. 2 lbs. 3 lbs.
1 to 10 Pkgs. \$2.50 ea. \$3.25 ea.
11 to 100 Pkgs. 2.25 ea. 3.00 ea.
For larger than 3-lb. Pkg. add 70c per lb.

Address until January 1st:
DAVID RUNNING, Filion, Michigan
After Jan. 1st: Sumterville, Alabama
Shipping Station: Epes, Alabama

PORTER

**BEE
ESCAPE
SAVES
HONEY
TIME
MONEY**

R. & E. C. PORTER, Mfrs.

Lewistown, Ill., U. S. A.

(Mention Am. Bee Journal when writing)

**CARNIOLANS**

Prolific at all times, gentle, good winterers, rapid to build up during the changing weather of the spring months of our northern states, and excellent workers. These qualities demonstrated by 25 years' experience with them. Bees and queens of my own and Jan Strgar imported strain.

2-lb. package with queen, \$3.75;
five, \$3.50 each.

8-fr. colony with tested queen,
\$12.00.

Untested queens: One, \$1.25; dozen,
\$12.00.

CAUCASIANS

From breeders imported from Prov. of Terek, Caucasus; breeders tested during 1930 and that show true Caucasian characteristics. Prolific, long-tongued, unbelievably gentle, best of workers.

2-lb. package with queen: One,
\$3.85; five, \$3.60 each.

8-fr. colony with tested queen,
\$13.00.

Untested queens: One, \$1.35; dozen,
\$13.50.

Packages and 8-fr. colonies ready May 5-15; untested queens, May 25. Packages and 8-fr. colonies limited. I am more convenient for eastern states and southern Canada. Less distance, less express charges, arrive in better condition.

ALBERT G. HANN

Glen Gardner, New Jersey

**PURE ITALIAN
BEES AND QUEENS**

Two-pound package with queen \$2.50

Select untested queens..... 1.00

Select tested queens..... 1.25

J. ALLEN

CATHERINE . . ALABAMA

THE EDITOR'S ANSWERS

When stamp is enclosed, the editor will answer questions by mail. Since we have far more questions than we can print in the space available, several months sometimes elapse before answers appear.

**PROTECTING COMBS UNTIL THE
HONEYFLOW**

How can I best care for about thirty brood frames until needed for swarms or increase, so that the moths will not destroy them. These combs were taken from hives in which the bees died during the winter.

Dr. Miller, in the Journal, one time said that there was no way so good as to give them to the bees. How should this be done? If I put the hive bodies containing these frames either on top of or under strong colonies, won't these colonies fill all these combs with honey before working in the supers?

PENNSYLVANIA.

Answer—Yes, if you put those hive bodies with combs on top of strong colonies, they will be likely to fill them with honey or brood, unless you keep an eye on them.

A very good way is to put those combs away in a well closed room and burn brimstone in the room, or put bisulphide of carbon in the hives containing them, two or three times a couple of weeks apart, so as to kill all the worms of the moths.

We generally use our surplus combs in enlarging large colonies that have too little room. Some of them are used for colonies that do not have their hive full. Others are used to replace drone-combs that we find in colonies, for we do not wish any drone-combs except in colonies of extra quality to supply our very best breeding drones.

There is always room for good worker combs in the spring, if you only look for it.

**TRANSFERRING HONEY FROM BROOD
TO SUPER**

Please tell me the reason why my bees carried all their honey from the brood frames up to the super I put on.

ILLINOIS.

Answer—Your explanation is not sufficient. If your bees put all their honey in the super during the late summer, it was evidently because they had plenty of room, plenty of bees, and a prolific queen. The only way in which we can force bees to keep their honey, or enough of it, in the brood chamber is by crowding them for room, by reducing the space in the upper chamber, if the season is poor, late in the summer.

But if your bees carried all their honey from the brood chamber to the super late in the fall, then I must give the answer that Dr. Miller so often gave: I don't know.

MOLASSES FOR SPRING FEEDING

Have you any information to give me regarding feeding of bees molasses? After March 1 our bees can fly almost every day, and as we frequently have very little for them to work on before May 1, it often happens that they let up brood rearing on account of shortage of stores. Would stock molasses do? I mean the molasses that is sold to mix with feed for stock.

KENTUCKY.

Answer—The feeding of molasses to bees has not been very satisfactory. In many cases they will not touch it. It evidently depends upon the grade of molasses used. It is a fact that, in times of dearth, they will hover around molasses mills, so they may be induced to use good molasses.

Of course, such food would be deadly for winter, but it may do for spring, when they can fly every day. The question remains whether there is any saving in giving them such stuff, because it is the saccharine mat-

ter that sustains them, and there is a large amount of waste in molasses. You might try a small quantity, diluting it slightly with water, so they may be better able to manage it. I acknowledge that the idea does not strike me as very favorable.

AGAIN—A CURE FOR BEE STINGS

Kindly advise through your "Editor's Answers" something to prevent bee stings from swelling, or, in other words, something that will cure bee stings.

I saw, about three years ago, a formula for treating bee stings, and used it, but for some reason or another I have misplaced the formula, so am asking for another.

TEXAS.

Answer—We have not yet heard of a remedy that would always succeed in preventing swelling in bee stings. The great trouble is that when the sting reaches under the skin, it is next to impossible to apply the remedy so that it will reach the venom. The venom is very volatile and spreads quickly. If you can apply aqua ammonia or spirits of camphor promptly, it will partly neutralize the action of the venom. Otherwise, about the only effect that we may expect is a quieting of the pain by application of water or other cooling remedies.

See the article by Meineke, on page 106 of the March number.

AVERAGE RETURN FROM BEEKEEPING

What would be a fair return, year in and year out, from one hundred colonies of bees? Our principal honeyflow is from sweet clover, of which there is an unlimited amount. We retail quite a lot, but the principal part will be sold through the wholesale trade. What I would like to know is, what your estimate is from your own experience.

KENTUCKY.

Answer—There is a great variation in the yield in different localities, due to the soil and climatic conditions, and there is also a great difference in the price at which honey sells, as well as a difference in the care given by beekeepers.

After having given the matter a great deal of thought, as nearly as we can determine about \$5.00 per colony is a fair average return for a long period of years in the average locality. In favorable situations, where the yield is especially good or the price is especially favorable, much larger returns are possible, while in some localities, where conditions are poor, a lower return is often received.

Under ordinary conditions, a hundred hives of bees will usually return about as much income as forty acres of farm land as usually managed. This again varies a great deal, depending on all the circumstances mentioned, but is perhaps a fair comparison.

MOVING BEES

I have a two-wheel trailer with which I want to haul bees. Will you please tell me which way the hives should be placed in the trailer? With the frames crossways of the road, or parallel?

Should a division board be inserted in the hives before moving, to take up the extra space, and would this board tend to stop the side-sway of the frames?

WASHINGTON.

Answer—The frames should always run lengthwise of the carrier in which they are moved, whether this is an automobile, a truck or a freight car. If the frames run

crosswise, there is a great deal of side motion, which is avoided when the frames run lengthwise of the carrier.

In preparing hives for moving, I have found that about the most satisfactory way is to tear up newspapers and crowd little pads of paper between the frames at the end. This makes it possible to hold them very solid and avoid the side-sway, and at the same time they can be removed very readily when the screen is taken off at the end of the journey.

The division board answers the same purpose, but it crowds the hive that much more and leaves that much less space and does not correct irregularity as in the case with paper.

ADDING QUEENLESS PACKAGES TO WEAK COLONIES

I have ordered some package bees from the South to strengthen my weak colonies. How must I go at it to unite these queenless package bees with my weak colonies to prevent the bees from fighting and killing each other? WISCONSIN.

Answer—Feed those weak colonies freely before the other bees are given to them. But be careful not to have any robbing.

On the day when you wish to unite them, remove enough combs from the weak colonies to make room for the box containing the bees. Cage the queen. Then place the package within the hive after having opened it. When the bees are all in the combs and the colony quiet, release the queen and return the combs that have been removed.

If there is not enough room in the body of the hive to place the package of bees, then put on an upper story and place the package in it. The bees of the package must not be hungry when released. But they usually have plenty.

There must not be any robbing going on. Robbing would cause the bees to fight the newcomers.

PACKAGE BEES AND DIVISIONS

1. Do you think I could divide my colonies (here in southern Indiana, when the most honey is in June) the first of July and build them up for winter?

2. What is the earliest date it would be safe to start package bees here in southern Indiana? INDIANA.

Answer—1. It is better not to wait till the end of the crop to divide your bees. Of course, you would get more honey, but the divisions might have to be fed or would suffer, while if you make the divisions a week or more before the end of the crop, they will probably make enough to keep them through.

2. Package bees might be started in southern Indiana by the fifteenth of April, or as early as the earliest fruit bloom. If you wait too long, they may not be ready with enough young bees by the first of June.

RICHER HONEY FROM SOME BEES

We all know that the milk of some breeds of cows is richer than that of some others. Now may something of the same sort be true of honey? May some "races" make richer honey than others?

I am a beekeeper—amateur—and on a very small scale (six colonies), and it seems to me that my honey is heavier and richer than the ordinary honey produced in this locality, and my friends to whom I have given samples say the same thing. My bees are Carniolans and Caucasians; everybody else in this locality has Italians. Now what would be your opinion? CALIFORNIA.

Answer—The production of honey is not at all like the production of milk. The cows eat grass or hay and produce fat, or milk, but the bees gather honey in their honey sacs and transport it to the hive. There is a slight mixture of their saliva with the nectar, but that does not change its quality, and clover honey, basswood honey, honey-

Pettit's Package Bees—Still Satisfy Highest Quality Italian Bees Best Possible Service

Shipment to Fruit Growers on 48 Hours' Notice if Previously Ordered.

NEW LOW PRICES FOR 1931

Combless packages with young Italian queen in each

	3	15	50	100
Two-pound	\$2.75	2.50	2.40	2.25 each
Three-pound	3.50	3.25	3.15	3.00 each
Four-pound	4.25	4.00	3.90	3.75 each

Five-pound orchard package ready to wrap and place in orchard.
Three, \$5.00; fifteen, \$4.75; fifty, \$4.65; one hundred, \$4.50 each

For queenless packages, deduct 70c each from above prices

Safe arrival and satisfaction is guaranteed and payment required before shipping date.

Last year we shipped four tons of bees, which was double our business of 1929.

Orders already booked indicate that this business will be again doubled in 1931. We started shipping the last week in February and are prepared to ship any quantity of combless packages anywhere any time until the end of May.

MORLEY PETTIT

ALBANY, GEORGIA

U. S. A.

WRITE US FOR LETTERHEAD DESIGNS

WATERLOO ENGRAVING & SERVICE CO.
WATERLOO, IOWA

Beekeepers Take Notice

For thirty years we have specialized in the manufacture of Sections from the whitest selected Wisconsin basswood.

We also manufacture hives, supers, frames and shipping cases.

Write for our free illustrated catalog

Marshfield Manufacturing Company
Marshfield, Wisconsin

A Book for Commercial Honey Producers

OUTAPIARIES—By M. G. Dadant

To increase yields or reduce costs means more profit. This book tells you what you want to know when you expand your operations beyond the home yard. We are meeting new conditions. Keep up to date.

Cloth bound, 124 pages. Fully illustrated. Postpaid, \$1.00

American Bee Journal

-:-

Hamilton, Illinois

GUS DITTMER COMPANY SPECIALTY

Working Your Wax Into Non-Sag Brood and Super Foundation for You for Cash

Prices of wax are very low, and so of course will be on foundation. We do not, however, offer price as an inducement, but merit only. Last two seasons have established and proven the merit of our claim for our Non-Sag Brood Foundation. For 1931 we submit the further improvement of making our Medium Brood two standard widths—8 1/16, seven sheets to the pound, and 7 3/4, eight sheets to the pound.

Write us for samples and prices

GUS DITTMER COMPANY . . . AUGUSTA, WIS.



DISPLAY YOUR HONEY PERFECTLY

Dependable Service on Standard Sizes

Our fluted honey jars are made as per specifications of Standardization Committee of the American Honey Producers' League

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DADANT & SONS, HAMILTON, ILLINOIS

and

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A. G. WOODMAN COMPANY, GRAND RAPIDS, MICH.

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HART

BOTTLES & JARS

Mention the American Bee Journal When Writing Advertisers

dew, etc., are entirely different from each other. It is the ripeness of the honey which makes it heavy, and this ripeness depends upon the length of time it has been in the hive.

Thus, we don't believe that any particular breed of bees produces honey better than other breeds, if the pasture is the same. But a strong colony will ripen honey more quickly than a weak one.

BEES REMEMBERING LOCATION OVER WINTER

I read in the January American Bee Journal, page 10, you say: "If bees taken from the cellar are returned in spring to the exact spot the hive occupied in the fall, there will be but little loss from bees' flight." Now do you mean that bees remember their location from the year before? I have kept bees for forty years and I never tried that out myself, but I don't see how they can remember their location from the year before if put in cellar.

WISCONSIN.

Answer—Yes, I mean that the old bees which are accustomed to the location will remember it after three months, more or less, of winter. Here is the experience which I had on the matter:

We used to have two styles of hives in our home apiary, the regular Quinby-Dadant hives with frames a little deeper and longer than the Langstroth and some hives with what we called American frames about 11x12 inches. We kept those hives in two separate groups, on both sides of the road which led up to our home. One summer we had occasion to have two colonies of bees in American frames, on the Quinby-Dadant side of the apiary. We neglected to carry them back to the proper side of the apiary, so when winter came we placed them in the cellar with the other hives, marking them to be put back on the other side of the apiary in spring.

When spring came, the hives were carried, as planned, and set on the proper side. During the day, after they were taken out, my father, who was always examining the bees and studying them, noticed some stray bees flying about in two spots of the apiary as if lost. He called me and asked whether I knew anything about those bees. I noticed at once that they were flying about the place where those two colonies had been located. We carried the two hives back to the spot and the lost bees showed their happiness by alighting and fanning at the entrance. Since that time, we have always made a practice of returning hives to the exact spot which they occupied. We make sure of this by leaving the cap in the apiary and marking it and the hive with the same number.

Not every bee will make this mistake—if it may be called mistake. But the oldest bees, those most accustomed to the location, will return to the spot, the only spot they know. Try it.

QUEEN EXCLUDERS

1. Which do you think is the best kind of queen excluder to use? I am now using some wood-bound zinc excluders.

2. Do you think changing colonies about or moving them a few rods from where they stood last fall would hurt them in any way?

WISCONSIN.

Answer—1. Any queen excluder, if carefully made, is suitable. We do not use any excluders in our apiaries.

2. Some bees do remember the location they occupied in the fall, but if you have to move them, spring is the best time. Place a slanting board in front of the entrance, so that, when they come out, they will notice that something is wrong and will examine the spot before taking their flight.

MEETINGS AND EVENTS

Current association meetings and organization notices are published in this department each month. Secretaries and other officers of organizations who wish publicity here should make sure that notices are sent in before the fifteenth of the month preceding publication. Frequently notices are received too late for use and consequently do not appear at all.

The Southern Conference of 1931 at Montgomery, Alabama

(Continued from page 165)

emphasis in the grading of honey today on color value. Many of the amber honeys in the South are excellent market grade. They should not suffer because of color. However, any strict application of the present grading rules places the emphasis on white honey. There should be some adjustment in this situation.

Previous to the opening of the Conference, a meeting of shippers was held to discuss ways and means of securing a reduction of the present express rates of one and a half times first class to first class. Information is to be collected concerning shipments and losses and the ratio of claim to receipts. The present refunds on losses to the breeders are for bees only which is really about one-third the shipping weight. Mr. Harrell, of the Hayneville Apiaries, was appointed to represent the shippers' interest at a hearing in New York at a later date.

An item of major interest on the program was the discussion of the special orchard package. E. G. Carr, of New Jersey, indicated results in that state, where probably more work has been done in the use of bees in orchards than any other place. G. H. Cale, of the American Bee Journal, and J. M. Cutts, of Montgomery, reported results in the use of bees in orchards and the development of the orchard package. It was Mr. Cale's opinion that the package must reach the fruit grower so he can set it down and forget it without any attention needed. At the end of its use it may be destroyed or sold. Such packages ought to be in heavy demand.

In his talk on honey advertising, Hon. Harry D. Wilson, commissioner of agriculture in Louisiana, struck the nail on the head when he said that "Honey is being discriminated against." He exhibited menus from hotels and cafes right in the city of Montgomery charging a premium on honey. Mr. Wilson said: "They put a charge on honey like the railroads do on Pullman cars." His one thought was that beekeepers must advertise their product.

Frank Willis Barnett, special writer of the Birmingham News, at a banquet Wednesday evening, outlined a series of fifteen articles on bees and

honey prepared for that paper. We have since received the first of them and they are evidently put up in a way to catch public attention. If you want something you can use locally about bees and honey, subscribe for the Birmingham News right now for the next fifteen weeks.

Following is an abbreviated copy of the resolutions:

Whereas, There is confusion in the law for controlling disease, and

Whereas, Some states have embargoes on bees on comb while still shipping diseased honey to clean territory, and

Whereas, These conditions affect the whole southern producing area, therefore be it

Resolved, That this Conference endorse the eradication of American foulbrood by fire.

Resolved, That this Conference endorse the free movement of clean bees with inspection certificates in any container and in any quantity from territory using fire eradication, and which has been declared free from infection at the point of origin.

Resolved, That this Conference consider the movement of honey from diseased sections where fire eradication is opposed.

Resolved, That this Conference undertake to protect the shipping section against honey from American foulbrood areas. Clean bees being demanded by purchasers, they must help maintain disease-free conditions in the section supplying their stock.

Whereas, A bill has been introduced in one state legislature to provide payment of indemnity for bees and equipment destroyed by the inspector because of disease,

Be it resolved, That this Conference is opposed to such an indemnity.

Be it further resolved, That a copy of this resolution be sent to the officials in Kansas, suggesting the avoidance of such legislation.

Whereas, There exists a need of closer cooperation among bee inspectors as reflected by "The Apiary Inspector's News Letter,"

Resolved, That a continuation of the News Letter be recommended.

Whereas, Some of the states and provinces do not have enough money for inspection work to safeguard both beekeeping and fruit growing, and whereas they are breeding areas for American foulbrood,

Resolved, That a copy of this resolution be sent to the officials in such states and provinces, calling their attention to the menace and offering support in remedying the situation.

Whereas, Beekeepers in states receiving bees through interstate commerce wish to purchase bees and equipment with freedom, without menace to the industry,

Resolved, That it be recommended that a committee be appointed by the president of the Apiary Inspectors of America to obtain information as to the efficiency of inspection in the bee shipping states, with the object of eliminating embargoes and restrictions on bees and beekeeping equipment in interstate commerce.

Be it further resolved, That a copy of this resolution be transmitted to the Southern Plant Board, suggesting that cooperation be given to this project.

Whereas, The Southern States Conference strongly condemns the practice of certain bee journals of accepting advertising and publishing reading matter from those known to be dishonest and guilty of acts injurious to southern shippers,

Resolved, That we pledge our moral and financial support to those bee journals who show their interest in the southern shippers by refusing to give space to these dishonest parties.

Resolved, That this Conference is for the American Honey Institute and urges all of the southern states and members of this Conference to make systematic, regular contributions towards its expenses, and that we ask the Institute to devote time and thought to southern needs.

Resolved, That this Conference realizes the need of an organization of the package bee and queen-rearing interests of the South, and urges re-formation of such an organization.

Resolved, That this Conference appreciates the courtesies extended by the Jefferson Davis Hotel, and hereby thanks the management for these attentions.

Resolved, That Montgomery has been a wonderful meeting place, and we thank the city and Mayor Gunter. We also express our appreciation for the work of Prof. J. M. Robinson for the Conference.

Whereas, It is the opinion of the Conference that beekeeping interests in America should organize into regional organizations, and

Whereas, The plan of organizations of state plant boards and state quarantine offices has worked to advantage; therefore

Be it resolved, That the Southern Conference suggest to the beekeeping interests that regional organizations be formed to coincide with the regional organizations of the plant quarantine officials of the United States, looking forward to more perfect national organization to be made up of elected members from the various regional organizations.

Be it further resolved, That should this plan be accepted, creating a national organization, that the national organization hold its annual meeting each year in connection with one of the regional organization meetings.

Be it further resolved, That the secretary of the Conference be directed to send a copy of this resolution to James I. Hambleton, U. S. Department of Agriculture, requesting him to exercise his influence in the premises.

Tennessee Annual Meeting at Nashville

At the annual meeting of the Tennessee State Beekeepers' Association at Nashville, February 20, I had a chance to listen to that dean of queen breeders, John A. Davis, of Springhill, whose queens have a worldwide reputation. Mr. Davis established his business at Springhill in 1871. He has tried all five races of bees, finally settling on the three-banded Italian as the most suitable. Mr. Davis is now 84 years old and in wonderful health.

Mr. Walling, state apiarist, gave a report of the season's work in inspection and extension. The drouth was bad; in some places trees died and bees almost starved. Under these conditions it was difficult to do inspection work successfully.

An interesting item in Mr. Walling's report is that Tennessee ranks second in the number of bees on farms and seventh in the amount of honey produced. A great deal of interest is also shown by the fruit growers in the use of bees for pollination.

Mr. Walling found only 1.4 per cent disease in the apiaries inspected. His extension work included one hun-

MAY[®]

THREE - BANDED ITALIANS PACKAGE BEES

Prices as follows—May 11 or later:
Two-pound packages with select
untested queens, each\$2.25
Three-pound packages with
queens, each 3.00

We guarantee pure stock, no disease,
safe arrival, and satisfaction.
Reference: Franklin State Bank,
Winnsboro, La., or any bee journal.

CROWVILLE APIARIES
Winnsboro, La.

**You will always be glad
that you bought pack-
age bees & queens from
Louisiana Southern Bee
Farm, Baton Rouge, La.**

UNEXCELLED ITALIANS

Louisiana Southern Bee Farm
Route 2, Baton Rouge, Louisiana

ATCHLEY BEE GLOVE

All pure white heavy duck, 22 inches long.
Washable while on hands. Absolutely sting
proof. Postpaid:

75c PER PAIR

Discount to dealers

WM. ATCHLEY

144 Campus Ave., Upland, California

Latham's Queens
"She-Suits-me" Queens
are line-bred three-banded
Italians

*This strain of Italians is unsur-
passed in tongue-length and also
in nectar gathering*

1 untested laying Queen 80 cents
6 for \$4 50 for \$31

Allen Latham
Wichita, Conn.
Season May 10-June 1

FOR SALE

ITALIAN BEES AND QUEENS

NOTHING BUT THE BEST QUEENS
75 cents each, \$8.00 per dozen

1 lb. of bees with young queen, \$2.00
2 lbs. of bees with young queen, \$3.00

All charges paid to your P. O.
Discount on larger orders

GRAYDON BROS.

ROUTE 4 GREENVILLE, ALA.

dred different talks on beekeeping
and forty-seven demonstrations.

G. H. Cale, of the American Bee
Journal, described the recent investi-
gations in the use of bees in orchards
and told the conference something of
the work of the American Honey In-
stitute.

The officers for the coming year
are: William Franklin, of Cleveland,
president; James E. Ring, of Frank-
lin, vice-president, and G. M. Bentley,
of Knoxville, secretary-treasurer.

It was a privilege to the writer to
be in the wonderful capital of Ten-
nessee, with its unique institutions
and interesting historical spots. Nash-
ville fully deserves the title "Athens
of the South." Its schools began be-
fore the city was founded. Today
there are more than ten thousand
non-resident students in its colleges
and universities.

It is fitting as a city of beauty that
it should have a complete reproduc-
tion of the Parthenon which crowned
the acropolis at Athens so many cen-
turies ago. It is just as it existed
there two thousand years ago. The
War Memorial Building on Capitol
Hill and the old Capitol Building are
beautiful structures, and the bee-
keepers are congratulated on having
such a place to hold their meetings.

G. H. Cale.

Calgary and District Association

At a recent meeting of the Calgary
District Association at Calgary, Al-
berta, Mr. Knechtel entertained with
an illustrated lecture on beekeeping.
The Association outlined a new set
of by-laws. E. G. Goodhall, secre-
tary of the Association, gave his an-
nual report, pointing out that since
the formation of the Association, on
July 7, the Association had prospered.
The quality of the season's
honey was reported to be fine and
of excellent flavor, commanding a
premium over other honey.

The first exhibition of the Associa-
tion was held in the Victoria Pavilion
last September. It is hoped to have
another exhibit during the coming
season. It is also expected that there
will be a few field days to give all
members a chance to meet other bee-
keepers.

Arthur Schultz, President of Fond du Lac Association

Arthur J. Schultz, of Ripon, was
re-elected president of the Fond du
Lac County Beekeepers' Association

BEES AND QUEENS

SERVICE QUALITY
SAFE ARRIVAL

SATISFACTION

Let Us Book Your Order

J. F. McVAY
JACKSON, ALABAMA

at a meeting held at the Community
Building, March 14. W. G. Taylor,
of Oakfield, was named vice-president
and William Sass, was renamed sec-
retary-treasurer.

County Agent S. P. Murat and
E. L. Mendenhall addressed the meet-
ing. For a year or more the atten-
tion of the county Association has
been diverted largely from local af-
fairs to consideration of state and
national marketing plans, it was
pointed out.

The members agreed that it will
be better for the interests of the
county organization and the industry
in the county if more attention is
paid to local matters. Both Mr.
Murat and Mr. Mendenhall spoke
about organization work.

It was determined at the meeting
that the association will look more
to the benefits which can be secured
through exchange of ideas and co-
operation in the limited field of the
county Association and pay less at-
tention to large marketing schemes.

T. N. B., Wisconsin.

February Meeting of Arkansas Valley Association

The fifteenth annual meeting of
the Arkansas Valley Beekeepers' As-
sociation was held in Wichita, Kan-
sas, on February 21.

Prof. R. L. Parker, state apiarist,
gave a comparative statement of the
consumption of stores in a mild win-
ter, emphasizing the fact that bees
consume fully 50 per cent more
honey than they would in a cold
year; that brood rearing is fully
forty-five days earlier in unprotected
hives, and the Kansas producers
should see to it that there are enough
stores between now and the honey-
flow. Dr. Parker also reported the
American Honey Producers' League
meeting at Toronto.

The Sedgwick county farm agent
promised the Association a full set
of Government bulletins on beekeep-
ing for their files, and the home dem-
onstrator furnished those present
with a copy of honey recipes and
gave a nice talk on honey, finishing
with the expression, "Have your
product good enough to use your-
self." She further stated that first-
grade honey might be used in most
recipes instead of sugar by using one-
fifth less liquid.

The election of officers resulted in
the following men being placed in
charge: R. R. Fooshee, Piedmont,
Kansas, president; A. W. Archer,
Hutchinson, Kansas, vice-president,
and Harold Sheppard, Wichita, Kan-
sas, secretary and treasurer.

The Association voted to have a
summer picnic on June 27 at Wichita
and invite the State Association of
Beekeepers to meet with us.

Harold Sheppard, Sec'y-Treas.

York County, Pennsylvania

The active York County (Pennsylvania) Beekeepers' Association met Tuesday, March 3, in the Federal building at York, Pennsylvania, and elected officers to serve the body during the coming year. J. H. Flohr, of Dover, long prominent in the county's activities, was chosen president.

Other officers chosen were: Vice-president, H. M. Geesey, York; secretary, E. J. Richardson, Fawn Grove; treasurer, W. H. Boeckel, of York.

Following the business meeting, the members heard an address on the subject of beekeeping delivered by Prof. J. E. Anderson of Penn State College. Professor Anderson later accompanied County Agent George G. Weber on an inspection tour, during which they visited the boys' and girls' bee club at Dover. Both had praise for this club, which was organized last year with eight boys and two girls on the membership roll.

W. E. Wolf.

Saskatchewan Convention

The ninth annual convention of the Saskatchewan Beekeepers' Association was held at the King's Hotel, Regina, on Thursday, February 5, and proved to be one of the most successful conventions that the Association has held.

The report of the secretary showed that many beekeepers benefit through the service of the Association, and practically \$6,000.00 worth of business was done during 1930.

Mr. C. B. Gooderham, Dominion apiarist, delivered an address on "The Constituents of Honey," pointing out its many and varied ingredients.

A demonstration was then given to the convention by Miss A. M. Kronberger on some uses for honey in jellies and marmalades. It was pointed out that many recipes contained only a small quantity of honey and those used in the demonstration were specially selected because they contained from 50 to 66 per cent honey. Among the exhibits sampled by the delegates were honey jelly, honey grape jelly, honey lemon jelly, and honey orange jelly, also grapefruit and orange marmalade.

Mr. R. M. Pugh, provincial apiarist of Saskatchewan, briefly outlined some points to be considered when selecting honey for exhibition, illustrating his talk with samples of honey from various parts of the province.

The meeting was then adjourned until 6:30 p. m., when a banquet was held with seventy-five in attendance. Mr. H. D. Pickett, K. C., vice-president, acted as chairman. The speakers were Mr. F. H. Auld, deputy minister of agriculture for Saskatchewan, Mr. S. Whittaker, M. L. A., and Mr. S. N. Horner, M. L. A.

(Continued on page 190)

Anybody Can Sell Cheap

But L. L. Forehand offers you high quality QUEENS AND BEES at a cheap price. Our QUEENS AND BEES are the fruits of over twenty years' experimenting and testing of all races of bees and all known methods of rearing queens. L. L. FOREHAND knows what it takes to make a SUPERIOR STOCK OF BEES, and we have them. We have hundreds of letters from all over the U. S. and Canada boosting our stock, so what better proof should anyone want?

LOOK WHAT WE OFFER! 25% OVERWEIGHT, BABY BEES, SELECTED QUEENS, PROMPT SERVICE, AND A MONEY BACK GUARANTEE

	1	6
2-lb. package with selected untested queen	\$2.60	\$2.40
3-lb. package with selected untested queen	3.35	3.15
2-fr. nuclei with selected untested queen	2.90	2.75
3-fr. nuclei with selected untested queen	3.70	3.55
Selected untested queens	.75	4.25

Let us quote you prices on large lots. Circular free for the asking.

GUARANTEE

We guarantee every package of bees and every queen to reach you alive and in good condition, to give perfect satisfaction, or we will replace free of cost to you or refund your money, with all charges you have paid out on transportation.

L. L. Forehand Apiaries, Jesup, Georgia

MOUNTAIN GRAY CAUCASIANS

Let us book your orders now for May and later delivery. No deposit asked. Our bees are very gentle, easy to handle, and are record honey producers.

Package bees—Three-pound, one to nine, each, with untested queens, \$5.00; ten and over, \$4.50. Two-pound, \$1.00 each less than three-pound.

Queens—Untested, one to five, each, \$1.25; six, \$7.00; twelve, \$13.50; thirteen to twenty-four, each, 90c; twenty-five and over, 81c each.

Health certificate with each shipment

Bolling Bee Company

--

Bolling, Alabama

SPECIAL PRICES

Medium Brood Foundation at 44c per pound

DELIVERED by PREPAID FREIGHT anywhere in U.S.A.
in quantity of 100 pounds or over.

For Thin Super, add 8c per pound

On less than 100 pounds, price is f. o. b. Los Angeles, Calif.

All highest quality, Weed Process, new 1931 stock, packed in 25-pound wooden boxes

SUPERIOR HONEY COMPANY

814 EAST SIXTY-FIRST STREET,

LOS ANGELES, CALIF.

EXTRA LARGE OVERSIZE

One Two-pound Package with Queen \$2.75; Six for \$15.30

QUEENS—THE VERY BEST

One \$.90, Six \$4.85. Write for prices on large amounts.

ROY S. WEAVER & BRO., Navasota, Texas

NOT A SINGLE REPORT

has been received of combs made from

THREE-PLY FOUNDATION

melting down in last summer's heat. Combs not of Three-ply used side by side with Three-ply combs melted down. Hundreds of dollars were lost from last year's heat by beekeepers who failed to use Three-ply.

The characteristics which prevent Three-ply combs from melting down in hot weather, where pure beeswax combs will, are just the characteristics that make Three-ply foundation so much better than pure beeswax foundation.

Three-ply foundation will not stretch, sag or melt down.

Use Three-ply foundation and have the best combs possible.

THE A. I. ROOT CO. of IOWA
COUNCIL BLUFFS, IOWA

You Have Gained by Waiting

Here Is Our Offer On Package Bees

Prompt Shipments Young Italian Bees
Overweight Packages
Never Any Disease in This Locality
Queens Clipped or Caged, Any Way You
Want Them

The following prices are by express collect:

	1-10	11-49	50 or more
2-lb. pkgs. bees with queens	\$2.20	2.10	2.00
3-lb. pkgs. bees with queens	2.95	2.85	2.75

The following prices are prepaid:

2-lb. packages bees with queens	\$3.25
3-lb. packages bees with queens	4.25

WILLIAM ROUTH, Helena, Georgia

"Quick Service, No Delay"



QUALITY, SERVICE and FAIR PRICES

I guarantee safe arrival, full weight, and entire satisfaction

Price List

I Prepay All Transportation Charges

2-lb. pkgs. with select untested queen, \$3.75 each
3-lb. pkgs. with select untested queen, \$4.75 each
25c less per pkg on orders for 10 or more pkgs.
50c less per pkg. on orders for 20 or more pkgs.

Select untested queens, \$1.00 each;
ten or more, 75c each.

Select tested queens, \$1.50 each;
ten or more, \$1.00 each.

All orders are filled with select three-banded Italian bees and queens from my tested strain.

HAYNEVILLE APIARY CO.

W. E. Harrell, Prop.

Hayneville - - - - - Alabama

Package Bees, Nuclei & Queens

Lower Prices

Pure Italians bred for business. Overweight packages and the best delivery to be had. Shipments when you want them. Safe arrival and satisfaction guaranteed.

2-lb. pkg. with queen, \$2.50 each; five, \$2.40 each.
3-lb. pkg. with queen, \$3.25 each; five, \$3.15 each.
2-fr. nuclei with queen, \$2.75 each, any quantity.
3-fr. nuclei with queen, \$3.50 each, any quantity.
Untested queens, 70c each; 12 or more, 65c each.

If package bees are wanted in large quantities, write for special prices. Book your order now and reserve shipping date wanted. We are prepared to serve you. Shipping starts April 1, weather permitting.

Lewis Beeware and Dadant's Foundation
at Catalog Prices

YORK BEE CO., **Jesup, Ga.**

Crop and Market Report

Compiled by M. G. Dadant

For our crop and market page, we asked reporters the following questions:

1. What percentage reduction in price was necessary to move this year's crop of honey compared to 1929 crop?
2. How much honey left on hand now?
3. Honey plant prospects?
4. How have bees wintered?

Reduction in Prices

It was surprising to the writer to find that so many of the reporting beekeepers had been able to get prices equal to last year for their honey without very much difficulty. Numbers more had held to their price and not reduced until over half of the crop was sold. The average of the reduction in price for the remainder ran about 10 to 20 per cent. There were, however, some localities—and these were generally in the intermountain territory and the far West—where the reduction in price necessitated to move the crop was from 35 to 45 per cent, and some of the crop not yet moved at these reductions. This was also the case with a number of large beekeepers in isolated areas where no local marketing of honey was attempted and the large markets only were resorted to as formerly.

All in all, we believe the average reduction in price of the reporters would be about 10 to 15 per cent, which is nothing unusual considering the reduction in other lines.

Honey on Hand

The New England States and generally the central West and Southeast are not suffering from the amount of honey left on hand, although there are a number of the larger commercial beekeepers who still have the bulk of the crop on hand. Among the states that appear to be the worst situated in this particular are New York, Michigan, and Florida. This also applies to some extent to Wisconsin. In the plains area the honey seems to be pretty well disposed of generally, with the exception of a few large beekeepers. It is in the intermountain territory, however, and the far West that stocks on hand are the largest, running as high as 50 and 75 per cent in many instances. In fact one reporter states he has his entire crop of extracted honey on hand yet. Comb honey seems to have moved pretty well, with little left on hand. For the country over, we would estimate that perhaps 15 to 20 per cent of the crop still remains on hand, with a demand that has been increasing during the past few weeks, perhaps due to the fact that wholesalers are now running out and also that the reduced prices have encouraged the substitution of honey for some of the other sweets and thus made for heavier sales.

Honey Plant Conditions

Honey plant conditions are about average in the New England States, below average in New York and eastern states, and very far below average in the central West, where white clover is main source of flow. In fact the dry weather almost cleaned out all white clover and it will take another year before the plants can again get started. Those areas in the central West which are exceptions are where either alsike or sweet clover is the mainstay, and in these sections the prospects seem to be fairly good, although not up to the average. In the Southeast, conditions seem good except in Florida—in fact a little above average. Texas reports wonderful prospects, with only average for Arizona and New Mexico. The plains states from South Dakota south have average or above average prospects so far. In the

intermountain territory prospects are perhaps a little below average because the snows have not been sufficient enough to guarantee irrigation water for the season. In the Northwest and California prospects seem to be at least normal.

Wintering of Bees

In practically all cases bees have wintered in excellent fashion. In fact there has been no loss to amount to anything, owing to the open winter. We have had some reports also that bees do not seem to have consumed as much stores as one would consider they would under conditions of such an open winter. Of course, the season for heavy consumption of stores is now approaching and undoubtedly the bees will have started brood rearing earlier, which will make them deplete their stores more rapidly in the season. For this reason there is considerable danger that there will be a lot of starvation of bees all over the country, north of the Ohio River particularly, unless they are carefully watched by the beekeeper and kept supplied with enough honey at least to keep them going.

Summary

Taking all things into consideration, we would estimate that the plains states have perhaps been in a more advantageous condition than any other section of the country during the past year. Their crop was above average, it has sold fairly well, crop conditions are good for next year, and bees have wintered excellently. This condition exists except for North Dakota and sections of South Dakota, where there has been quite a reduction in acreage of sweet clover, which is bound to cut on the prospects for a crop. Dry weather also cut somewhat on the stand of the clover.

There are no doubts but that there are large amounts of honey, particularly carloads, left in the West, which is going to be difficult to move before another crop at anything like satisfactory prices. Of course, low prices encourage sales, and for this reason, if there is any improvement in conditions, we may look for an improvement in sales of honey.

Canada

In eastern Canada conditions are about what they are in the states lying just south—that is, honey plants and the prospects are fairly satisfactory. The honey crop has not moved as one would wish, but the demand has been better lately and there is no great discouragement. Prices have ruled lower.

In the Canadian prairie provinces most of the honey is out of the hands of the producers. Few wholesalers are pretty well stocked with honey, but most seem to buy not more than a month's supply.

Prices are low, very much lower than they were a year ago, but beekeepers do not seem to be discouraged, because the reduction has not been as great perhaps in honey as it has been in some other lines, like wheat. In fact there is likely going to be some increase in beekeeping for this reason.

Although the weather has been extremely dry, there have been snows lately, which would indicate that perhaps there will be the normal amount of moisture. Bees are wintering in excellent condition and considerable demand is being experienced for package bees.

All in all, it would appear that in the prairie provinces the honey would be pretty well cleared up for a new crop and everything set for a larger season than ever with the beekeepers, particularly in the provinces of Saskatchewan, Alberta, and Manitoba.

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The BEEKEEPER'S EXCHANGE

Copy for this department must reach us not later than the fifteenth of each month preceding date of issue. If intended for classified department, it should be so stated when advertisement is sent.

Rates of advertising in this classified department are seven cents per word, including name and address. Minimum ad, ten words.

As a measure of precaution to our readers, we require references of all new advertisers. To save time, please send the name of your bank and other references with your copy.

Advertisers offering used equipment or bees on combs must guarantee them free from disease, or state exact condition, or furnish certificate of inspection from authorized inspector. Conditions should be stated to insure that buyer is fully informed.

BEEES AND QUEENS

BUY your queens from Allen Latham, Norwichtown, Conn.

BOOKING orders for 1931. Combs of brood, \$1 each; combless pounds, \$1 each. Spring reared good Italian queens \$1 each. Gentle, light colored stock. Everything shipped in approved standard packages. Orchard pollinating packages a specialty; fool proof. Fifteen years' experience. Reference given. Literature sent. No Canadian business accepted. Jes Dalton, Kenner, La.

QUEENBEES—Select untested Italian queen-bees, guaranteed in every particular, including safe arrival. Prices: One, \$1.00; 12, \$10.00; 100, \$75.00. First delivery 1931 queens March 1. Edson Apiaries, Gridley, Calif. "Breeders, not Brokers, for 12 years."

FOR SALE—My old reliable three-banded Italians are honey getters. They are gentle, prolific and resistant to foulbrood. With state certificate. One untested, 75c; one tested, \$1.25. Two-pound package, \$3.50. Jul Buegeler, Alice, Texas.

EARLY PACKAGE BEES—Prompt shipment, beginning May 1. Two-pound package without queen, \$2.50; three-pound, \$3.50. Add price of queen if wanted. Choice hardy Italian queens, \$1.00; ten for \$9.00. Safe arrival guaranteed. Birdie M. Hartle, 924 Pleasant St., Reynoldsville, Pa.

FOR high grade golden and three-banded Italian bees and queens, try Carolina Bee Co. strain. They are of beautiful color and real honey gatherers. Untested queens, \$1.00 each; six, \$5.00; twelve, \$9.00; \$65.00 per hundred. Tested, \$1.50 each. Write for prices of package bees. Carolina Bee Co., George Elmo Curtis, Mgr., Kenansville, N. C., Route 2.

FOR SALE—Pure Italian package bees. Two-pound package, one to ten, \$2.40; ten or more, \$2.30. Three-pound package, one to ten, \$3.30; ten or more, \$3.20. Without queen, deduct 70c per package. Full weight and satisfaction guaranteed. Certificate of inspection with each shipment. Ten per cent books order; balance before shipment. Clemens Sieber, Box 673, Woodland, Calif.

WARD'S Italians get the honey. Queens and package bees. Queens for May, \$1.00 each. Two-pound package and queen, \$3.00, prepaid; three-pound package and queen, \$4.00, prepaid. C. W. Ward, R. 1, LeRoy, Kansas.

GOLDEN Italian queens and bees for 1931. Quality higher, but prices lower. Untested, 75c each; \$60.00 per 100. They are still the big, bright, hustling kind. They are guaranteed to please you. Two-frame nuclei or two-pound packages with queens, \$3.00 each; ten or more, \$2.75 each. Health certificate furnished with each package. E. F. Day, Honorville, Ala.

PACKAGE BEES—Three-banded Italians. You can save money by ordering your package bees from the Little River Apiaries. Full weight and prompt service to every customer. Bees shipped in light, roomy cages; syrup feeder in cage. Queen shipped inside of package bees in queen cage. We are prepared to do our part in delivering young Italian bees and young Italian queens

to you when you want them, the kind that pay a profit the first season. Two-pound package with queen, 5 to 100, \$2.00 each; three-pound package with queen, 5 to 100, \$2.50 each. Ten per cent books orders, balance before shipment. Safe arrival guaranteed. Health certificate with every shipment. Little River Apiaries, Box 83, Gause, Texas.

FOR SALE—The famous golden Italian queens and bees. One queen, 75c; six, \$4.25; twelve, \$8.00. One 2-lb. package with untested queen, \$3.00. Charges prepaid. Satisfaction guaranteed in U. S. and Canada. E. A. Simmons Apiaries, Greenville, Ala.

TO READERS of the American Bee Journal: Give me a chance at your orders for bees and queens. Quantity, quality, promptness in shipping, and my customers stay with me. A postal card brings my prices. O. P. Hendrix, West Point, Miss.

BORDELONVILLE APIARIES—Two-frame nucleus with three pounds of bees and a select three-banded Italian queen introduced for \$4.25; ten or more, \$4.00 each. If two pounds of bees with two frames, it costs \$1.00 less; if four pounds of bees with two frames, it costs \$1.00 more. All loss will be immediately replaced. Twenty per cent books your order. Bordelonville, La.

FOR more pleasure and profit, try our gentle Caucasians. Untested queens ready April 10. One, \$1.25; six, \$7.00; twelve, \$13.00. Safe arrival and satisfaction guaranteed. Tillery Bros., Greenville, Ala., R. 6.

GOLDEN Italian queens, as good as can be reared with 25 years' experience. Tested, \$1.25; select tested, \$2.00. Untested, May and June: One, \$1.00; two to five, 90c each; six to eleven, 80c each; twelve to 49, 70c each; fifty or more, 65c each. State inspected. Satisfaction guaranteed. D. T. Gaster, R. 2, Randleman, N. C.

IF you want gentle bees, good honey gatherers, my strain of golden Italians will please you. Prices: One untested, \$1.00; two to five, 90c each; six to eleven, 80c each; twelve to forty-nine, 70c each; fifty or more, 65c each. Tested, \$1.25; select tested, \$2.00. Circular on request. Health certificate, safe arrival and satisfaction. Hazel V. Bonkemeyer, R. 2, Randleman, N. C.

I OFFER a little more value for each dollar spent for package bees and queens. Write me what you think you are going to need and be convinced. R. V. Stearns, Wharton, Texas.

CHOICE, bright Italian queens that are a pleasure to work with and you will be proud to own. Requeen with stock that has been bred and selected in the North the past twenty-eight years for good wintering; hustlers, gentle, and fine color. One queen, \$1.00; dozen, \$10.00. Breeders, \$10.00. Emil W. Gutekunst, Colden, N. Y.

PACKAGE BEES—Italian queens. Orchard package. For prices see page 198. Homer W. Richard, 1411 Champlin, Eldorado, Arkansas.

QUEENLESS PACKAGES for strengthening weak colonies. Two pounds, \$1.75; 2½ pounds, \$2.00; 3 pounds, \$2.25. Herron & Stone, Millerton, Oklahoma.

BEEKEEPERS can save money here. Package bees without queens. Two-pound package, \$1.50 each; three-pound, \$2.00. William Piefer, Gause, Texas.

GOLDEN ITALIAN QUEENS producing large, beautiful bees. Solid yellow to tin. Untested, \$1.00; select tested, \$3.00. Will trade for pump shotgun. Dr. White Bee Company, Sandia, Texas.

NEW ENGLAND QUEENS—Hardy, vigorous, light-colored Italians. June-September, untested, \$1.00. Roland T. Bousley, Rowley, Massachusetts.

BEEES AND QUEENS—Two pounds of bees with queen, \$2.00; three pounds, \$2.50, in quantities. See my large ad on page 193. H. E. Graham, Box 735, Cameron, Texas.

BIRD'S CAUCASIAN QUEENS have no superior and few equals. Why? They are Mendelian bred. Longest life and tongue of any race. Best imported stock, bred upon request. Try them. Select untested, six, \$1.25 each; twelve, \$1.15 each. Shipment May 25. Bird's Apiaries, Odebolt, Iowa.

FOR SALE

FOR SALE—About 200 standard 10-frame hives and 500 supers at low prices. Write to George S. Hall, Plainfield, Wisconsin.

HONEY PUMP—Never been used. Cheap. H. B. Steele, Billings, Montana.

FOR SALE, OR TRADE for package bees, American bolter for sawing eight-foot short logs. W. M. Peacock, Mapleton, Iowa.

OLD BOOKS on bees for sale. Write us for list and prices. John F. Hawkins, P. O. Box 263, Chester, Pa.

225 COLONIES of bees, ample equipment. Cheap. Clean, save one yard of about a dozen colonies. 1406 Sixth Avenue, Cedar Rapids, Iowa.

GENUINE pure maple syrup: gal., \$2.50; six, \$13.50. Postage or express extra. Weight 13 pounds. Jerome Stange, Loyal, Wisconsin.

FOR SALE—55 ten-frame supers for comb honey, nearly new, 50c each. E. Adams, Earlville, Illinois.

154 ACRES—Good goat, small fruit and bee farm for 400 colonies, in fireweed district. Joe Marty, Silverton, Oregon.

BARGAIN LIST—Every item in good, usable condition. Priced to sell quickly. Reason for selling, no longer listed in our catalog. Brushes, cartons, glass jars, lithographed pails, smokers, veils, box seats, feeders, section presses, shipping cases, foundation, queen cages, etc. Write for free list. G. B. Lewis Company, Watertown, Wis.

FOR SALE—Good used equipment, priced for quick sale. Health certificate furnished. 100 ten-frame hives with frames, metal cover, bottom, \$1.25 each; 100 ten-frame, seven-wire queen excluders, 30c each; 20 Modified Dadant seven-wire queen excluders, 40c each; 10 Modified Dadant hives, metal cover, bottom, no frames, \$2.00 each; 100 eight-frame T supers, complete except sections, 40c each. Carl E. Killion, 313 Campbell St., Paris, Illinois.

HONEY FOR SALE

HONEY FOR SALE—Any kind, any quantity. The John G. Paton Company, 230 Park Avenue, New York.

FOR SALE—White clover honey in 60-pound cans. None finer. Satisfaction guaranteed. J. F. Moore, Tiffin, Ohio.

HONEY FOR SALE—All grades, and quantity. H. & S. Honey and Wax Company, Inc., 265 Greenwich St., New York City.

FOR SALE—"Black Hills" fancy extracted honey from sweet clover and alfalfa, in 60-lb. cans, at 8 1/3 cents per pound. Write for prices on large lots. Ernest W. Fox, Fruitdale, S. Dak.

FOR SALE—Extra choice white clover honey, case or carload; also amber. David Running, Filion, Mich.

FOR SALE—Our own crop white clover and amber fall honey in barrels and cans. State quantity wanted and we will quote prices. Samples on request. Dadant & Sons, Hamilton, Illinois.

FOR SALE—Northern white, extracted and comb honey. M. W. Cousineau, Moorhead, Minn.

NEW CROP shallow frame comb honey, also section honey; nice white stock, securely packed, available for shipment now. Colorado Honey Prod. Ass'n, Denver, Colo.

WHITE Clover extracted honey. Write for prices and samples. Kalona Honey Co., Kalona, Iowa.

CLOVER honey, choice, ripened on bees. Satisfaction guaranteed. Case or quantity. E. J. Stahlman, Grover Hill, Ohio.

FOR SALE—Delicious palmetto honey in barrels; also heavy bodied amber. P. W. Sowinski, Fort Pierce, Fla.

HONEY FOR SALE—White and amber honey in 60-lb., 10-lb. and 5-lb. tins. Write for prices. Dadant & Sons, Hamilton, Illinois.

HONEY—We sell the best. Comb in carriers of eight cases each; extracted, basswood, buckwheat, sweet clover, white clover and light amber. Tell us what you can use for prices. A. I. Root Company of Chicago, 224-230 West Huron St., Chicago, Ill.

FOR SALE—Sweet clover extracted honey; quality and body fine. Thomas Atkinson, Route 5, Omaha, Neb.

FOR SALE—White clover comb, $4\frac{1}{4} \times 4\frac{1}{4}$ by 1 $\frac{1}{2}$ sections. C. Holm, Genoa, Ill.

LOWER prices on comb and extracted honey. Write H. G. Quirin, Bellevue, Ohio.

FINE Clover honey, extracted; by case or ton. State amount needed and get prices. L. G. Gartner, Titonka, Iowa.

FINE quality clover-basswood extracted, $7\frac{1}{2}$ c.; buckwheat, $6\frac{1}{2}$ c. Fancy white comb. A. J. Wilson, Hammond, N. Y.

FOR SALE—2000 sections fancy at 16c; 2000 sections No. 1, 14c. $4\frac{1}{2} \times 1\frac{1}{2}$ -inch sections white clover comb honey. Harry M. Sulzberger, Box 86, Ransom, Ill.

FANCY white clover, comb and extracted honey for sale. Reasonable. Joseph Stoller, Stark, Ill.

STURDEVANT'S CLOVER HONEY—Large-ly from Trifolium Repens, with alfalfa and sweet clover. Comb honey, white, white wax; 14-, 12-, 10-ounce cases separately. Unwrapped or cellophane wrapped. Bids invited. Sample sent for approval if bid favorable. Extracted, same quality, packed $2\frac{1}{2}$ -, 5-, 10-, 60-pound tins. No labels attached unless ordered. Associated Apiarists, J. H. Sturdevant, Manager, St. Paul, Neb.

FOR SALE—Sixteen cases mixed comb honey, \$2.00 per case; eight cases buckwheat, heavy, \$2.00 per case. N. B. Querin, Bellevue, Ohio.

SPRINGTIME is maple syrup time, and the bees and birds are ushering in this season's "America's Greatest Delicacy" with lowest prices in thirty years. We handle and sell annually thousands of gallons of maple syrup and our now famous "Honey Maple Table Syrup" and tons of composition and pure maple cream and sugar, for we are in the maple syrup center of the world. One hundred per cent pure maple syrup only \$1.50 per gallon in 5-gallon honey tins, one or two per case; 50-50 maple and cane patties, 50 per box, \$1.50; cream, 2- and 5-lb. cakes, 25c lb. Same, 100 per cent pure, \$2.75 box and 35c pound, and 1-lb. bars 30c pound. Crop is short account of drought and will have to raise these prices very soon, so enclose us 10c for samples and write us today for our new illustrated circular showing our line. Griswold Honey Company, Madison, Ohio.

10,000 POUNDS of that fine northern Michigan honey left; 120 lbs. to case. Sample 15c. Offers considered. George Jaquays, East Jordan, Michigan.

FOR SALE—100% pure maple syrup, 100% pure country sorghum, comb and extracted honey. C. J. Morrison, South Bend, Indiana, 1235 Lincoln Way West.

MICHIGAN white clover honey of finest quality in new 60-lb. cans; also white comb honey. Orval W. Dilley, Grand Ledge, Michigan.

HONEY AND BEESWAX WANTED

WANTED—Shipments of old comb and cappings for rendering. We pay the highest cash and trade prices, charging but 5 cents a pound for wax rendering. Fred W. Muth Company, 204 Walnut St., Cincinnati, Ohio.

WANTED—A car or less quantity of white honey in 60-lb. cans. Mail sample and quote lowest cash price for same. J. S. Bulkeley, 816 Hazel St., Birmingham, Mich.

WANTED—Car lots of honey. State quantity, shipping point and price. Mail sample. Hamilton, Wallace & Bryant, Los Angeles, Calif.

WANTED—Several tons white honey. Mail sample and quote lowest cash price. Will trade pound package bees for honey with responsible producers. A. W. Bulay, Livingston, Texas.

WANTED—Western states water-white and white honey in car lots. Send type samples. Advise quantity, price and point of shipment. E. F. Lane & Son, 325 Davis St., San Francisco, Calif.

WANTED

WANTED—Honey in 10-lb. pails, in exchange for chicks. Ames Hatchery, Deerfield, Wis.

WANTED—Extracting colonies, cheap for cash. State particulars. Dr. Winneman, Merrill, Wis.

WANTED—Man to run bee yard of 185 colonies. Write G. O. Bosche, R. 4, Box 133, West Allis, Wisconsin.

WANTED—Some Modified Dadant hives complete, in good condition. N. G. Coleman, R. 5, Galena, Illinois.

SUPPLIES

THE DADANT SYSTEM IN ITALIAN—The "Dadant System of Beekeeping" is now published in Italian, "Il Sistema d'Apicoltura Dadant." Send orders to the American Bee Journal. Price \$1.00.

BEST QUALITY bee supplies, attractive prices, prompt shipment. Illustrated catalog on request. We take beeswax in trade for bee supplies. The Colorado Honey Producers' Association, Denver, Colo.

SAGGED COMBS are result of slackened wires caused by wires cutting soft wood of frames. Use metal eyelets. Per 1,000, 60c. Handy tool for inserting eyelets 25c. Postage 3c per 1,000. Superior Honey Co., Ogden, Utah.

FOR SALE—We are constantly accumulating bee supplies, slightly shopworn; odd sized, surpluses, etc., which we desire to dispose of and on which we can quote you bargain prices. Write for complete list of our bargain material. We can save you money on items you may desire from it. Dadant & Sons, Hamilton, Illinois.

MAKE queen introduction sure. One Safin cage by mail, 25c; five for \$1.00. Allen Latham, Norwichtown, Conn.

COMB FOUNDATION—Note these low prices on 20-lb. lots: Medium brood, 54c; thin section, 60 cents. Can furnish the new non-sagging foundation. Wax worked at lowest rates. E. S. Robinson, Mayville, N. Y.

FOR SALE—Queen mailing cages. Material, workmanship and service all guaranteed. Write for quantity prices. Hamilton Bee Supply Co., Almont, Mich.

SEND for our latest reduced prices on hive bodies, frames and full line of beekeepers' supplies. Williams Bros. Mfg. Co., 5125 82nd St., Portland, Ore.

FUSSY foundation fastening avoided. Perfect sections insured by using full sheets of foundation in split sections with the help of spreaders shown on page 71 of February Journal. \$1.00 pair, postpaid. C. L. Snedecor, Chinook, Mont.

MISCELLANEOUS

THE BEE WORLD—The leading bee journal in Great Britain and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy, post free, 12 cents stamps. Membership of the Club, including subscription to the paper, \$2.55 (10/6). The Apis Club, Brockhill, London Road, Camberley, Surrey, England.

PLANS FOR POULTRY HOUSES—150 illustrations. Secret of getting winter eggs. You need this book. Write for free offer and sample copy of Inland Poultry Journal, 51 Cord Bldg., Indianapolis, Ind.

MARBLEBOARD BINDER—For back copies of the American Bee Journal. Will hold two years. Keeps your magazines in shape for ready reference. Price only 75c, postpaid. American Bee Journal, Hamilton, Ill.

HAVE YOU any Bee Journals or bee books published previous to 1900 you wish to dispose of? If so, send us a list. American Bee Journal, Hamilton, Ill.

VITEX, "Negundo Incisa." The only nectar producing vitex listed by the Bureau of Foreign Plant Introduction. 24- to 36-inch trees, 50c, prepaid. Joe Stallsmith, Galena, Kansas.

"VITEX NEGUNDO INCISA"—If you can sell anything, you can sell Vitex. You may be the man I am looking for to be my agent. Earn a few \$ extra this year. Free literature and agent's proposition on request. Charles Mottet, Webb City, Mo.

HONEY LABELS and printing. Catalog and samples free. Correspondence solicited. Traders Printing Company, Springfield, Mo.

Alfonsus Succeeds Marvin at Wisconsin

Erwin C. Alfonsus, son of Alois Alfonsus (former apicultural advisor to the Austrian Government), who has been located for several years in the Department of Beekeeping at the University of Minnesota, has left that institution to succeed George Marvin at the University of Wisconsin College of Agriculture, under Prof. H. F. Wilson.

Mr. Alfonsus is a graduate of the University of Minnesota and of the Tierszthichen Hochschule of Vienna. He has had a lifetime of experience in beekeeping and has a wonderful background for honey and beekeeping research which he will undertake in his new position.

New Iowa Report

The report of the state apiarist of Iowa for 1930 is just received. This is the twelfth report issued by F. B. Paddock, the present apiarist, and the nineteenth of the series. The volume contains one hundred pages and includes contributions from several well known men. Of special interest is the list of bee magazines in the Miller Memorial Library at the University of Wisconsin. It is assumed that the list is compiled by Prof. H. F. Wilson, custodian of the library, although no name is attached to the contribution. The list contains the names of 109 periodicals devoted to beekeeping which have been published in the United States and Canada now in the library. Unfortunately it has been impossible to secure copies of some of the bee publications which have been started.

The Iowa report is sent out on request only, and as long as the supply lasts copies may be obtained by writing to Prof. F. B. Paddock at Ames, Iowa.

Yancey Hustlers for Canada

We ship hundreds of packages to Canada every year with perfect success. Our liberal overweight packages of young bees, with vigorous, hustling queens, and our prompt service will surely please you. We breed the three-band strain of Italians only.

	1 to 24	25 up
2-lb. package with queen	\$2.50	\$2.25
3-lb. package with queen	3.25	3.00

Write or wire for prices on large lots. Complete satisfaction guaranteed

Caney Valley Apiaries, Bay City, Texas

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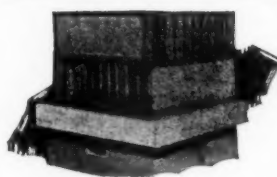
We have Lewis-Dadant goods on hand at all times. Remember this year prices are attractive. Whether you come over in your car or mail in your order, you save time and money at the Standard Lumber Co. We have everything you need to help you make the most of your bees.

**Dadant's Wired Foundation and
Lewis Slotted Bottombar Frames on hand at all times.**



We like rush orders. We buy in car lots and ship same day order is received.

The Standard Lumber Co.
Winona, Minn. Graceville, Minn.
Brainerd, Minn.



Quality and Service Is Our Specialty

Our prices are a little above the average, but our customers are pleased and come back for more every year. There must be a reason. A number of customers have written that they are well worth the difference in price, and one customer writes that he bought the best packages from us that he ever saw and that he had been buying package bees for many years and from many different shippers.

We guarantee that you will be pleased with our bees and queens. All we ask is that you give them a trial.

Two-pound package with queen, \$3.50; three-pound package with queen, \$4.50. Un-tested queens, \$1.00 each. Prices on quantity on request. Health certificate with each shipment.

J. M. Cutts and Sons, Route No. 1, Montgomery, Ala.

Highest Quality Bee Supplies

One Small Profit from Lumberman to You

Five wood-covered hives	\$7.95
25 or more, \$1.50 each	
Five metal-covered hives	9.75
25 or more, \$1.85 each	
Five shallow supers	3.00
25 or more, 55c each	
Hoffman frames, per 100	3.75
Shallow frames, per 100	2.50

Send for large catalogue
It will save you money

Bodies made either of pine or cypress. Don't be afraid of the quality of these goods on account of the low price. We

Telegraph office and shipping point:
Mayhew, Mississippi.

use absolutely the best lumber, but are able to make these low prices because our operating costs are low and only one small profit.

We ship to almost every eastern state, and can't remember when we have had a complaint as to quality.

Freight rates to following points:

Brighton, Ill.	\$.81
Chicago, Ill.	.94
Waverly, N. Y.	1.27
Battle Creek, Mich.	1.02
Tremont, Mass.	1.32
Dayton, Ohio	.96

Will quote you delivered prices on request

THE STOVER APIARIES
TIBBEE STATION, MISS.

Meetings and Events

(Continued from page 185)

The following are the officers who were elected for the ensuing year:

Hon. W. C. Buckle, Regina, honorary president; Thomas H. Mack, Lumsden, president; H. D. Pickett, K. C., of Moose Jaw, vice-president; R. M. Pugh, Regina, secretary-treasurer. Directors: John Hubbard, Grenfell; W. L. Dunavan, Crichton; J. Needham, Unity; Mrs. W. E. Carey, Windthorst; F. Amas, Qu'Appelle.

Maryland Has Good Meeting

The annual meeting of the Maryland State Beekeepers' Association was held in Baltimore with better attendance than ever. A number of the old pioneers were on hand again as well as many new faces.

I believe there is a tendency in most cases for meetings to be too long and for too many talks to be made, so this year we had on our program only three scheduled speakers: A. Howard Johnson delivered the presidential address and outlined an ambitious program for 1931. E. L. Sechrist, of the Bee Culture Laboratory at Washington, spoke on "Management," including a number of subjects which beekeepers have wanted to hear discussed. After the short interlude of entertainment, Dr. T. B. Symons, director of the Extension Service, University of Maryland, spoke on "A Greater Beekeeping Industry in Maryland." He proposed that we adopt a five-year developmental program and pledged his support to our undertakings.

The following officers were elected: A. Howard Johnson, president; William M. Aman, vice-president; Ernest N. Cory, secretary-treasurer; Dr. J. R. Abercrombie, director to Farm Bureau Federation, and George J. Abrams, delegate to Farm Bureau Federation.

George J. Abrams, Sec'y,
College Park, Maryland.

Idaho Producers at Boise Criticise "Honey Products"

Idaho honey producers, at their Boise convention recently, decided to ask the office of the food and drug administration of the Bureau of Chemistry at Washington to stop the misbranding of syrup products as honey products. Mr. Kjosness, manager of the Mountain States Association, declared before the members that there were candies and other foods sold in the East as honey products which in fact contained no honey at all.

Harry Newberry, of Filer, was elected president of the Idaho Association; C. M. Miller, of Nampa, secretary-treasurer.

Other speakers included C. F. Buck, of Walla Walla, Washington, and M. L. Dean, of the Idaho Department of Agriculture. G. P.

What's Happened?

"Bees never do anything invariably," Dr. Miller wrote. In thirty-two years I never had another experience like one I had this summer. My best colony at apple blossom time occupied two stories, with sixteen frames full—or mostly full—of eggs and brood and honey in the four outside frames. As I wanted to raise an early queen of this strain, I took three frames of brood, a spare frame of honey, and bees to cover the frames well, and set them in the cellar, putting them on a new stand the following evening. All the bees stayed, so far as could be seen.

A week later there were sealed queen-cells. At the proper time for the new queen to be mated and laying, the nucleus was examined. No queen, no eggs; cells torn as if by a queen. Another frame of brood was given, on the theory that the queen had been lost in her mating flight, although the weather had been good and drones plentiful. Another frame, containing eggs, and larvæ in all stages, was given. Ten days later the brood all was sealed, but there were no queen-cells. Naturally the first thought was that there must be a queen, possibly not mated, but the most exacting search failed to disclose her. The operation was repeated, frames containing eggs and larvæ being given at intervals of a week, but not until the third frame of brood was given did the bees start queen-cells. They produced a fine, prolific queen—apparently the equal of her mother.

Lest anyone say, "Lack of stores," let me state that the nucleus was storing honey constantly and gaining in strength. It had ample stores at all times. There were no laying workers.

S. F. Haxton.

Honey for Cataract

Concerning the various articles which have recently appeared in the American Bee Journal regarding the medicinal properties of honey, especially for curing cataract, I wish to state that there was a standing advertisement in the Liverpool Catholic Times (England). The advertisement was to this effect, as far as I remember: That any case of cataract cured in eight weeks by the use of lotus honey. I am not quite sure that I have the full address of the firm advertising. At any rate, as far as I remember, it was Sry, Calcutta, India. Evidently honey from the lotus has some very pronounced virtue, and anyone suffering from cataract could easily get the address from the above mentioned paper.

W. E. Monaghan, Canada

APRIL AND MAY --- BEES AND QUEENS

We offer you—the finest, light-colored, three-banded and golden bees in the South. Very gentle, easy to handle, great honey gatherers.

You can't afford to miss this opportunity.

2-lb. package with queen	\$ 2.75
3-lb package with queen	3.50
Ten 2-lb. packages bees with queens	25.00
Ten 3-lb. packages bees with queens	32.50

Queens 90c each, or \$8.00 a dozen

Satisfaction Guaranteed

Capital paid \$100,000. 1400 stands of bees in five counties.

40 years' experience in breeding good bees.



THE ROBINSON APIARIES, Bartlett, Texas

These bees were developed during the most drouthy weather, and those which made good were kept for development

ROOT SERVICE

FROM

CHICAGO

WE WILL ALL WIN

SUCCESS

through good planning and endeavor this year. Plan and prepare now to give your bees a full chance. You cannot do this when the honeyflow is on. Root Quality supplies will help. We have a large, new stock ready for your orders.

Write for the new 1931 Root Bee Supply Catalog

A. I. ROOT CO., OF CHICAGO

224 W. Huron Street, CHICAGO, ILL.

BEES

3 lb. Pkg. Purely Mated Italian Queen \$2.50

Satisfaction Guaranteed

These packages will contain full three pounds (when packed) of young worker bees, with young purely mated Italian queen caged among them. The bees will run from all blacks to all Italians.

This price is made possible for the reason that we have access to the colonies of beekeepers who desire to keep down swarming until the main honeyflow.

HERRON AND STONE, Millerton, Okla.

REDUCED PRICES

ON

BEE SUPPLIES

Lower prices on practically everything in our catalog. If you have not received a copy of our 1931 catalog, it will pay you to write for one before placing your orders

A. H. RUSCH & SON CO.,

Reedsville, Wisconsin

Mention the American Bee Journal When Writing Advertisers

Gaspard's High Quality Golden and Three-banded Italian Queens and Bees for the season of 1931 at the following prices:

Special orchard package or early builder, composed of a 2-frame nucleus, three additional pounds of bees with a select young queen introduced, for \$3.75 each, any number.

2-lb. packages with select young queen—One to nine \$2.50 each; ten or more, \$2.25 each.
 3-lb. packages with select young queen—One to nine \$3.25 each; ten or more, \$3.00 each.
 4-lb. packages with select young queen—One to nine \$4.00 each; ten or more, \$3.75 each.
 2-fr. nucleus with select young queen—One to nine, \$2.50 each; ten or more, \$2.25 each.
 3-fr. nucleus with select young queen—One to nine, \$3.25 each; ten or more, \$3.00 each.

All bees are shipped on standard Hoffman frames of brood and honey. Prompt and efficient service, safe arrival guarantee, and a health certificate with each shipment. All loss will immediately be replaced upon receipt of bad order report signed by express agent. Shipping season starts April 5. Orders booked with 10 per cent down, balance at shipping time. Also ship combless packages if wanted, at same price as comb packages.

Address J. L. GASPARD, HESSMER, LOUISIANA

Woodman's
Folding Wire
Veil is cool
and comfort-
able, with
clear vision,
and folds flat
when not in
use. Postpaid
Each \$1.00
6 for 5.00
12 for 9.00



NEW BINGHAM
BEE SMOKER



Bingham Bee
Smokers have
been on the
market over
50 years and
have pleased
beekeepers in
many lands.
Made in sev-
eral sizes, of
tin and cop-
per. For sale
by numerous
dealers.

The Universal Honey Extractor

is guaranteed to please you and to meet your every requirement. Built for heavy duty production. Eight shallow or four deep frames at a loading. We have one report of 5,500 pounds being extracted in 9½ hours. Few require one of larger or smaller capacity. It is fully UNIVERSAL. Price \$29.50. Catalogue and printed matter sent on request.

A. G. WOODMAN CO., Grand Rapids, Mich.

Hummer's Gold Star Package Bees and Queens



Our prices are the lowest in our history. Never in the sixteen years that we have been shipping bees have we offered bees at the low prices we are making now. You can buy our packages with the assurance that you will make money at the low money prices now prevailing.

Two-pound package—1 to 10, \$2.40; 11 to 25, \$2.30; 26 to 50, \$2.20; 51 to 100, \$2.00.

Three-pound package—75 cents more.

All above with select untested queen, guaranteed purely mated

Geo. A. Hummer and Son, Prairie Point, Miss.



Save Time--Save Worry

Dadant's Wired Foundation

Can be nailed into Lewis Slotted Bottombar Frames in a jiffy.
And such wonderful combs!

Sold by all dealers in Lewis Beeware
and Dadant's Foundation



Moving Bees

When we move bees to a new yard or for some sale, we close the entrance at night, when all the bees are at home, with a screen cover and solid block entrance. We do not use any smoke till at the time we want to open them where they are to stay. Then we smoke them gently as we open the entrance, and set a slanting board in front of the hive for a day or two so they mark their new location.

I read some place that you should smoke the bees when they are closed in for hauling, which I think would be **wrong**, for some bees would be killed by the smoke and no place for it to escape.

William A. Heiss,
Pennsylvania.

What Kind of Publicity Do You Give Your Honey?

"The Story of Sugar from Flowers," booklet written by Dr. Barnard, president of American Honey Institute, is distributed by the apiaries of Mount Hope Farm, Williamstown, Massachusetts. This farm is owned by E. Parmalee Prentice, son-in-law of John D. Rockefeller, who is working to improve the breeds of cattle and of poultry and studying the problems of the orchard.

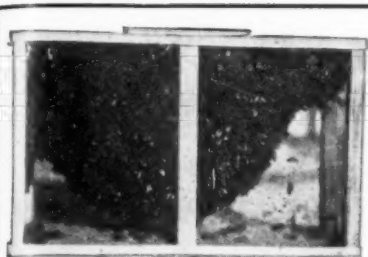
He is much interested in bees, and this little booklet of eight pages with a tasty blue cover in gold type goes to thousands of customers who enjoy the products of Mount Hope Apiaries. It is authoritative and delightful reading. An article under the same title, "The Story of Sugar from Flowers," was written by Dr. Barnard for the Home Economist.

Some kind of publicity should feature your honey to your customers. Use some of the American Honey Institute material to give the background of impartial authority to your sales literature.

Chayote—A New Honey Plant

A new honey plant, whose numerous edible parts make it a veritable horticultural marvel, has been recently introduced into Florida. This remarkable plant, the chayote, which has been grown extensively in Mexico, where it is native, and Porto Rico, and has been favorably received in Australia, Algeria, and the West Indies, has shoots resembling asparagus, fruit like the squash, roots which are as edible as potatoes, and leaves and stems that are said to make the finest kind of greens and salads. The fact that the flowers produce nectar which makes delicious honey adds another count to the service record of this vegetable dinner.

N. N. Dodge.



Combless packages of quality—on the dates you want them. Young, pure three-banded Italians, bred for gentleness and honey producing ability.

With queen	2 lbs.	3 lbs.
1 to 5 pkgs.	\$2.75 each	\$3.50 ea.
6 to 15 pkgs.	2.50 each	3.25 ea.
16 to 50 pkgs.	2.30 each	3.15 ea.
100 pkgs.	2.25 each	3.00 ea.

For larger packages, add 75c a pound. Queenless packages 75c each less. Shipping season starts April 5. Satisfaction guaranteed.

Select young laying queens, 85c each; six to fourteen, 80c each; fifteen or more, 75c each.

W. D. ACHORD
Fitzpatrick, Ala.

Extensive shippers for 19 years

KELLER Comb Frame HANDLER

Handles frames quickly and easily with one hand. A quarter turn locks it. Sure grip on frame. Will not damage frame. Fits all Hoffman standard frames.

If not satisfactory, return within 30 days and your money will be refunded.

\$2.00 Postpaid. Send for Circular
P. C. KELLER, HOMEWOOD, ILLINOIS

GOOD QUALITY UNTESTED THREE-BAND QUEENS

\$1.00 each 6 for \$5.00

Now Ready

D. W. HOWELL, Shellman, Ga.

Let Us Quote Prices on Your Needs in Package Bees and Italian Queens for Early Spring Delivery

All bees shipped from strong, healthy colonies.

Queens reared in large mating nucleus to insure the best development possible.

Bees shipped in new cages with new feed cans. Cages not to be returned. Satisfaction guaranteed.

R. E. LABARRE
Shasta County Cottonwood, Calif.

E. E. Mott's Northern Bred Italian Queens Non-Swarming

See free list with testimonies. Cannot tell it here. Select untested, guaranteed purely mated or a free queen. Why buy hybrids? April-May, \$1.10; six, \$5.75. June 1, \$1.00; six, \$5.50; twelve, \$11.00; fifty, \$42.50. Select tested, \$2.00. Virgins, 50c; 12, \$5.00. Safe delivery and satisfaction guaranteed.

E. E. Mott & Son, Glenwood, Mich.

"BETTER BRED" QUEENS AND PACKAGE BEES

Now booking orders without deposits

The quality of our queens and package bees is as good as the best and our service is second to none

A postal card will bring our descriptive literature to you. Let us tell you all about our bees; it's free.

Package Prices

Queen Prices		Two pounds	
1 to 10	80c	1 to 25	\$2.50
11 to 25	75c	26 to 50	2.40
26 to 100	65c	51 to 100	2.25
		Three pounds	
		1 to 25	\$3.25
		26 to 50	3.15
		51 to 100	3.00

Have never had any disease here; however, a health certificate accompanies each shipment. Reference: Citronelle State Bank.

CALVERT APIARIES, Inc., Calvert, Ala.

R. G. Holder, Pres.



WESTERN CANADA BEEKEEPERS

Whether you need only a few hives or a 50-frame extractor like this one, it will pay you to write for our 1931 catalogue before ordering.

S. P. HODGSON & SONS

NEW WESTMINSTER

BRITISH COLUMBIA

PACKAGE BEES AND QUEENS

APRIL AND MAY DELIVERY

2-lb. package with young Italian queen—1 to 10, \$2.25 each; 10 to 100, \$2.00 each.
3-lb. package with young Italian queen—1 to 10; \$3.00 each; 10 to 100, \$2.75 each.

Young untested Italian queens, the best that money can buy, at 50c each, any number desired.

We ship you full weight packages of young bees in light, roomy cages, on sugar syrup. Safe arrival, health certificate and all necessary papers for foreign shipments. Many years' experience. Prompt delivery.

COTTON BELT APIARIES, Paris, Texas, R. R. No. 2

**The American Bee Journal extends their greetings to the
Canadian Beekeepers and Advertisers this issue.**

The POSTSCRIPT

GOSSIP ABOUT THE OFFICE IN THE MAKING OF THE MAGAZINE

The senior editor is eighty years old this month. His birthday falls on my wedding anniversary. Such days return with surprising frequency as we grow older. It is difficult to understand how the years can be so long when one is young and grow so short as the time goes by. C. P. Dadant does not seem like an old man. It is true that he no longer cares for so many details as he did a few years ago, but he is active and alert and does not look old. When we remember that he has had an active part in all the important developments of our industry from the days when bees were kept in boxes, when there were no smokers nor extractors nor comb foundation, we realize that he has lived for a long time. He knew Langstroth and many of the others who made important contributions to the development of beekeeping and has worked with them in bringing these changes to pass. It is my pleasure to pay a tribute of high regard to my chief and to congratulate him upon a remarkable life.

Stingless Bees

Occasionally a letter comes to me from someone without experience with bees who wishes to learn where stingless bees can be obtained. Were it not for the fear of stings there would be a great increase in the number of beekeepers. The stingless bees of the tropics are kept in rude boxes or hollow logs and are unsuited to the modern hive with frames, since they do not build combs like our honeybees. Neither will they stand our cold northern winters, so there need be no anxiety that they will compete in our markets. The quantity of honey secured from them is small in comparison to that produced by well managed Italians or Caucasians.

Foreign Honey

On page 179 McCain speaks of Hawaiian honey as "foreign" honey. It was my impression that Hawaii is part of the United States. If Hawaiian honey in California is "foreign" honey, then how about California honey in New York or Illinois?

That Honey Pie

In the Chicago Journal of Commerce, W. G. Sibley now confesses that he never heard of "honey apple pie." He enquires whether it is made of "honey apples" or whether it is a mixture of apples and honey. Sibley says that one who invents a wholesome superior pie is a benefactor of the human race. Who invented the honey apple pie? Betty Crocker introduced it to the world in her nation-wide broadcast, but the "inventor" remains unknown.

Sidelines

Kelty writes from Michigan that the honey prospect from clover is only about 50 per cent of normal and that some beekeepers are developing sideline interests as insurance against further crop failures. It seems but a short time since beekeeping was generally practiced as a sideline with some other business. It seems strange to think that the condition is now reversed and beekeepers are looking for other things as sidelines to go with beekeeping. Commercial honey production is generally but a recent development.

New Wrinkles

W. J. Sheppard writes that they have given up the top entrance as originally devised in favor of an entrance at the top of the brood chamber. This becomes a middle entrance during the honey harvest and a top entrance for the winter period. Results are very favorable. Friend Sheppard has been under the weather for several months and has undergone some serious operations in an effort to regain his health.

On page 175 W. H. Lewis reports his trial of lighted hives. Those British Columbia fellows are great for experiments. Funny, is it not, that folks find out the most about bees in localities where the honeyflows are relatively light? They get far bigger crops of honey in the prairie provinces of Canada than along the west coast, but we don't hear so much about experiments.

Less Guesswork

A Wisconsin beekeeper writes that beekeeping was formerly a big gamble, with winter losses and crop failures frequent. Now the winter loss can quickly be replaced with package bees, and sweet clover largely reduces the danger of crop failure in the plains region. In a good sweet clover location beekeeping is as certain as any other farming venture.

Outside the sweet clover region many of our readers report slim prospects. A Missouri reader says that the maples bloomed in February and that bees were working on dandelion in March, but that clover was killed by last summer's drouth and that the bees will do well to live until Spanish needle blooms next fall.

Anything Wrong with Honey?

Just as I expected, there is a comeback to that "What Ails Honey?" article last month. On page 157 Bohne makes a pretty good case for honey as it is. He still leaves us with the problem of getting each separate kind of honey to the proper consumer.

Then Dillon comes along suggesting that big things are about to happen in beekeeping. After visiting a few of the men who are producing from one to five carloads of honey each season, I have concluded that honey production is already "Big" business in some neighborhoods. Where there is a large production of uniform quality the marketing problem is much simpler than where the same apiary secures several different colors and flavors during the season.

The Best Race

Latham started something when he wrote that article praising the Italians as the best race of bees. Morley Pettit comes to his rescue on page 158 after several contenders have praised the dark races. Over on page 170 Maurice Shutts says that "there is no such animal," and I wonder if, after all, he is not about right. Anyway, we have had a lot of fun reading the letters that have come in as a result. Beekeepers still seem to enjoy an argument.

Frank C. Pellett.

An Open Letter

From One Beekeeper to Beekeepers
Everywhere

About the American Honey Institute

By Samuel Cushman
Beekeeper, Lecturer, Teacher, Chicago, Illinois

THERE can be no doubt, among well informed beekeepers, of the great value of the work of the American Honey Institute, which has so effectively and continuously called the attention of the public to the desirability and use of honey through the food columns of newspapers, magazines, radio broadcasts and the lecturers and teachers on foods and cooking.

The effect has been widespread over the country and has been secured at a small fraction of the cost of any other effective advertising campaign, and all of us benefit from it. With the results so plainly shown in so short a time, it would seem that nothing is so important to the industry as to insure the continuation and further extension of this work and that the majority of honey producers would be willing to do their share if the matter is presented to them in the right way.

Recent issues of all the bee journals have given much space to tell of this work, and honey producers are urged to contribute to the fund, to send to the secretary of the American Honey Producers' League one dollar for each 2000 pounds produced each year. Many state and county beekeepers' associations have enrolled many for such contributions at their meetings, and some officers and members have personally solicited all beekeepers in their territory, with good results.

This movement is spreading and many willing ones have and will sign up and give their loyal support. Many eager readers of the bee journals will no doubt respond and mail in their contributions. Others need to have the value of this advertising explained to them by a capable solicitor or salesman or saleswoman. Doubtless too many producers who would respond gladly with their contribution may never hear of it unless sought out and asked to do their share.

In justice to those who do contribute, there should be launched, it seems to me, a widespread campaign that will attempt to reach every one-ton or more producer in every county of every state through a well qualified solicitor or by a direct mail appeal from some authorized representative in every state, who has been provided with a complete list of beekeepers in his district.

It has been stated that to attempt any other plan than to collect through voluntary workers would be too expensive. It seems to me, however, that the head of a central office of the allied industries that started the Honey Institute or of the American Honey Producers' League could systematize such a campaign that, with the help of agricultural colleges and state apiarists and bee inspectors, would cover the entire country. Such an office could supply direct appeal circulars and letters that would sell the idea, and subscription blanks and addressed envelopes, and do this at a cost that would be but a small per cent of the total collected.

That the majority of the producers will fail to support the Institute to continue this great benefit to all seems incredible, provided they fully understand what it has already accomplished—that it is no longer an uncertain experiment.

The experience of the allied fisheries industries of Great Britain is a lesson and example for our honey producers. Their members were fewer in number and not scattered over so wide a territory, and were more easily reached, but the same principles should govern in advertising U. S. and Canadian honey.

In the Chicago Herald and Examiner, B. C. Forbes, well known writer on business matters, says: "Every business man wants to know how he can increase his business at a profit." Then he tells of the British fishing industry, which had declined badly. Two years ago the leading firms of trawler owners agreed to levy a penny a pound on the value of all fish caught, to spend in advertising. Last year the total was \$700,000, all spent on the "Eat More Fish" campaign, with which the world is now familiar.

Today seventy-two new boats have been launched and shipyards are building trawlers fast.

Our Honey Institute has made contacts that cause certain baking and other food producers to use more and advertise the use of honey on or with their products. Its head, Dr. Barnard, and Miss Fischer and other assistants have shown they are the right ones for their positions, and we should all do our part. Long live the American Honey Institute.

Chicago, Illinois.

Northeast Texas Queens and Package Bees

We specialize in pure Italians

Queens 50c each

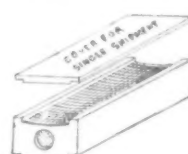
We guarantee these queens to be 99 per cent purely mated and to equal the best of the higher priced queens on the market. We have enlarged our yards and can handle any size order and ship on date wanted. No order too small to be appreciated. Health certificate with each shipment. Place your order now. All inquiries promptly answered. We guarantee safe arrival in good condition. Our tremendous production enables you to buy queens with breeding that would otherwise cost a great deal more than the price asked.

Reference: First Nat'l Bank,
Paris, Texas

2-lb. Package with un-
tested queen \$2.25

3-lb. Package with un-
tested queen 3.00

O. D. Rivers
Powderly, Texas



THE PINARD
NAILLESS
QUEEN BEE
Shipping Cage
Patented
Send for circular or
samples.

A. B. Pinard, 810 Auzerais, San Jose, Calif.

Palmetto Queens 50c Each

Back on the job again with more Palmetto Queens. 1931 prices as follows: One queen, 60c; half dozen, \$3.50; dozen, \$6.50; fifty or more, 50c each. All queens reared from imported stock. Rear three-banded only. Guarantee safe delivery. No disease.

C. G. ELLISON -:- Belton, S. C.

PACKAGE BEES & QUEENS For April and May Delivery

Two-pound package with untested queen, \$2.00 each, any number.
Three-pound package with untested queen, \$2.75 each, any number.

All Italian stock. No disease. Health certificate with each shipment. We guarantee safe delivery and satisfaction. Book your order early and have shipment arrive on time. Baby bees and young queens. 12 per cent overweight.

THE MANGHAM APIARIES
Mangham, La.

Don't Read This Ad

1931 SPECIAL POSTPAID OFFER ON BUCK'S COMB FOUNDATION IN U. S. A.

Buck's Improved Medium Brood 7 Sheets Per Pound

1 lb.	\$.65
2 lb.	1.25
5 lb.	2.95
25 lb.	13.75

100 lb. 47.00

ORDER NOW

**100 lb. Lots by
FREIGHT PREPAID**

Buck's Regular Thin Super 28 Sheets Per Pound

1 lb.	\$.75
2 lb.	1.45
5 lb.	3.35
25 lb.	15.75

100 lb. 55.00

This Price Effective 'Till May 15, 1931 Only. All Offers subject to Previous Sales.

Get Our 1931 Catalog.

Everything for the Beekeeper.

THE CARL F. BUCK CO. Comb Foundation Specialists **Walla Walla, Wash.**
The Largest and Most Complete Line of Beekeeper Supplies in the Pacific Northwest

CALIFORNIA

PACKAGE BEES AND QUEENS

HIGHEST QUALITY

PRICES

"In Line With the Times"

	1-10	10-25	25-100
Two-pound Package with Queen	\$2.25	\$2.15	\$2.00
Three-pound Package with Queen	2.80	2.70	2.60

Select young Untested Italian Queens, guaranteed purely mated: One, 75c; 50, 70c; 100, 65c each

We have doubled our capacity in order to be in position to supply our customers Package Bees and Queens at prices that will show them a profit, even in these times of low prices for honey. We ship by express or parcel post, using our NEW light weight cages—none to return—and can save you money in transportation charges on any size order.

J. E. WING

COTTONWOOD

CALIFORNIA